



FOSTERING INNOVATION IN THE PUBLIC SECTORS OF THE ARAB REGION

**TECHNICAL REPORT ON THE INNOVATION PROCESS TYPE AND TIME
MATURITY MODEL (IPTTM)**

ACKNOWLEDGEMENTS

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I. INTRODUCTION: ON THE QUEST OF MATURITY FOR PUBLIC SECTOR INNOVATION WORK

This introductory chapter to the IPTTM model for Innovation Process Type and Time Maturity of public sector innovation efforts is focused on a discussion of the idea of *maturity*, a concept that comes forward in many discussions on public sector innovation, as well as public sector work in general. The chapter embarks on some observations for the everyday non-technical meanings assigned to this term, continued by more technically-focused interpretations, to conclude with the way and rationale along which the concept of maturity is forming part of the IPTTM model.

A. THE CONCEPT OF MATURITY IN COMMON THINKING AND PRACTICE

In everyday language, and common thinking and practice, maturity is a concept that comes forward in many instances where the objective is to express the idea that some actor, some object or some phenomenon has reached a desirable state of properties and behavior. Indeed, everyday meanings of the word *mature* include

- *based on slow careful consideration; having completed natural growth and development; having attained a final or desired state; having achieved a low but stable growth rate*¹;
- (talking about people) *well developed emotionally*²;
- *having reached the most advanced stage in a process*³.

At the same time, Wikipedia articles on the concept of *maturity*, i.e. the quality of being mature, provide some interesting insights into more specialized meanings of this term. According to Wikipedia:

- *In psychology, maturity is the ability to respond to the environment in an appropriate manner.*⁴
- *A mature technology is a technology that has been in use for long enough that most of its initial faults and inherent problems have been removed or reduced by further development.*⁵

As can be observed from these definitions, maturity is a quality closely linked to three more qualities:

- (a) the quality of being fully developed;
- (b) the quality of being free from faults; and, consequently,
- (c) the quality of being able to provide appropriate response.

At the same time, as also testified by the meanings presented above, maturity has a twofold relation with time:

- Maturation, i.e. the process of becoming mature, is exactly a process, and not an instantaneous event. In other words, since properties (a) and (b) above need time to get accomplished, maturity needs time or, otherwise put, *time controls maturity*.
- For human actors and human-made processes maturity, once achieved, has to do with being able to manage time in an appropriate fashion. Be it for taking the time necessary to respond appropriately (according to property (c)) based on slow careful consideration (cf. the meanings of mature above), or for being able, out of experience, to respond appropriately in a quick and timely manner, *maturity controls time* (as the payback, in a way, of having itself been controlled by time for long enough).

Especially concerning human actors' behavior and human-made processes, maturity does not only need the simple elapse of time, in the sense discussed above, but is essentially derived as the outcome of experience accumulated over the time elapsed. This experience is itself the outcome of (1) being exposed to a diverse

¹ Source: Merriam-Webster Dictionary, webpage <https://www.merriam-webster.com/dictionary/mature>.

² Source: Cambridge Dictionary, webpage <https://dictionary.cambridge.org/dictionary/english/mature>.

³ Source: English Oxford Living Dictionaries, webpage <https://en.oxforddictionaries.com/definition/mature>.

⁴ Source: Wikipedia, webpage [https://en.wikipedia.org/wiki/Maturity_\(psychological\)](https://en.wikipedia.org/wiki/Maturity_(psychological)).

⁵ Source: Wikipedia, webpage https://en.wikipedia.org/wiki/Mature_technology.

environment, with many and different events and conditions each calling for response; (2) trying to respond to the latter and subsequently reflect on the appropriateness of the responses provided; (3) trying to deduce what can be improved in order to deliver more appropriate responses, and accept to change as may be required for such improvements; and, last but not least, (4) effectively changing. In this sense, maturation, namely the process of attaining maturity, can be conceived as a circular process such as the one depicted in Figure 1 below. Clearly, such a process takes time.

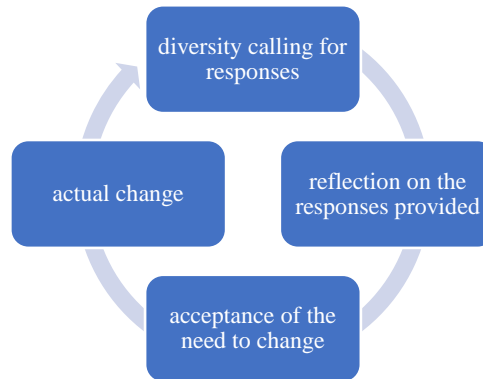


Figure 1. A circular view of a maturation process, i.e. an experience accumulation process that leads to maturity over time. Diversity calling for response is considered the entry point of this process, whereas the outcome of the process is some actual change in order to be able to appropriately respond to such diversity in the future.

Source: Consultant, original work for the study on Fostering Innovation in the Public Sectors of the Arab Region.

It can be noted that these conceptions of maturation and maturity are especially true for human-made processes in complex domains, where diversity may be increased at levels difficult to manage. It can also be noted that the more increased the diversity of a domain, the more increased the time that may be needed for all this diversity to manifest itself and trigger repeated occurrences of the maturation process above, therefore the more increased the time needed for maturity to be achieved.

Bringing these observations to the domain of public sector innovation, whose complexity stems both from the inherent complexity of the innovation process and from the practical complications that public sectors face in their work overall, it can be noted that maturity in public sector innovation work is an objective that needs time to accomplish.

B. THE CONCEPT OF MATURITY IN TECHNICAL THINKING AND PRACTICE RELATED TO INNOVATION

In any domain of human work, complexity and criticality are two conflicting aspects, given that

- complexity makes it difficult to achieve appropriate results, whereas
- criticality makes it necessary to achieve appropriate results.

It is out of this conflict that, in domains both complex and critical at the same time, many different ways of work are proposed, in order to find either an one-fits-all approach, or at least some well-defined alternative approaches, or at least some more general guidelines, that can effectively handle complexity and meet the critical objectives of results quality. In this way, in any such domain, many and different process types gradually emerge.

The domain of innovation, and especially so of innovation in the public sector, is a typical case in which this general observation is manifested. Indeed, the multitude of innovation process types, as well as the discussions on how to make these fit the particular characteristics of public sector work, are both emanating from the fact

that innovation is complex in itself, whereas the outcomes of public sector work are clearly critical at many levels. It would be interesting, at this point, to cross-reference this observation with the discussion behind the reasons for the existence of so many innovation process types provided in another chapter of the study, as part of the introductory notes to the IPEG empirical guide.

In such complex and critical domains of work, as different process types are proposed and evolve over time, the state of the art inevitably comes to a point where the discussion moves beyond which process type to choose to a more general issue, that of ensuring the quality of work processes independently of the exact process type that these are based on. In this respect, given that the quality of a process is a more general concept, which has to do with the ability to make this process free of flaws and ensure that it can respond to needs, the quest for processes of good quality, no matter their process type, has led to two new concepts, those of *capability* and *maturity*, giving to both these terms a more technical meaning.

Using a simple working definition of capability and maturity models provided by Wikipedia, a Capability Maturity Model (CMM) is “*a model representing the degree of formality and optimization of processes in an organization*”⁶. Historically, the first Capability Maturity Model ever has been developed for software engineering processes, for which many different and competing process types have evolved following the software crisis phenomenon during the 1960-1970 decades⁷. The Capability Maturity Model for Software (Version 1.1) was published in 1993 by Paulk et al as a Technical Report of the Software Engineering Institute at Carnegie Mellon University⁸ and, in summary, as an IEEE Software article by the same authors⁹.

The recognition that the original CMM model has gained as a systematic way to care for the quality of software engineering processes, has led to the application of this model for processes in many other domains. As of the time of writing (January 2018), the CMMI Institute, one of the leading know-how providers in this area, provides CMM models for product development (CMMI-DEV), service provision (CMMI-SVC), product and service acquisition (CMMI-ACQ), workforce capabilities improvement (PCMM) as well as data management (DMM) processes¹⁰. All of these models are based on the standard maturity levels defined by CMMI for processes in a domain-agnostic way, which are presented in Figure 2 below.

As can be seen from this figure, moving from lower (1 – Initial) to higher (up to 5 – Optimizing) maturity for any process entails a number of improvements, which have to do with

- making sure that this process is effective in terms of results and constraints (maturity level 2, for managed processes);
- creating standard descriptions and guidance for this process across organizational units (maturity level 3, for defined processes);
- making sure that this process regularly contributes to quantitative performance objectives (maturity level 4, for quantitatively managed processes); and
- making sure that this process is stable enough to serve as basis for improvements and innovation (maturity level 5, for optimizing processes).

⁶ Source: Wikipedia article on Maturity, webpage <https://en.wikipedia.org/wiki/Maturity>.

⁷ More information available in webpage https://en.wikipedia.org/wiki/Software_crisis.

⁸ Paulk, M.C., Weber, C.V., Curtis, B. and Chrissis, M.B. (1993). *Capability Maturity Model for Software (Version 1.1)*. Technical Report CMU/SEI-93-TR-024 ESC-TR-93-177. Pittsburgh, PA: Software Engineering Institute, Carnegie Mellon University. Online available at <https://resources.sei.cmu.edu/library/asset-view.cfm?assetID=11955>.

⁹ Paulk, M.C., Curtis, B., Chrissis, M.B. and Weber, C.V. (1993). Capability maturity model, version 1.1. *IEEE Software*, 10(4), July 1993, pp. 18-27. DOI: 10.1109/52.219617.

¹⁰ More information available in webpage <http://cmmiinstitute.com/cmml-models>.



Figure 2. The process maturity levels defined by CMMI Institute for work processes in different domains.

Source: CMMI Institute website, <http://cmmiinstitute.com/capability-maturity-model-integration>.

Based on this line of thought, capability and maturity models have been developed in many more domains¹¹, including that of digital transformation, where CMM models have been proposed by a number of consultants and practitioner community organizations. Recently published (2017) such models include, from those more addressing the private to those more focused on the public sector:

- The TMForum Digital Maturity Model for Digital Transformation¹², focused at communication service providers and identifying Customer, Strategy, Technology, Operations and Culture / People / Organization as critical capability dimensions for achieving digital maturity.
- The OpenROADS Open Digital Maturity Model V2¹³, addressing digital service providers and identifying Strategic Dynamism, Digital Culture, Talent & Skills, Optimal Customer Experience, Data Centricity, Service Innovation & Optimized Delivery and Digital Technology Leadership as critical capability dimensions for achieving digital maturity.
- The Forrester Digital Maturity Model 5.0¹⁴, targeted at the business community, which identifies Culture, Organization, Technology and Insights as critical capability dimensions for achieving digital maturity and four maturity segments corresponding (from lower to higher maturity) to Skeptics, Adopters, Collaborators and Differentiators.
- The Gartner Digital Government Maturity Model 2.0¹⁵, addressing public sectors and providing a correspondence of the CMMI maturity levels 1-5 to E-Government, Open, Data-Centric, Fully Digital and Smart Government respectively.

A similar line of work has been undertaken by consultants and researchers in order to bring the CMMI maturity levels, and the logic underlying them, to the domain of innovation and innovation management. Approaches that can be mentioned in this respect include:

¹¹ As an indicative source, cf. the <https://scholar.google.com/scholar?q=capability+maturity+models> query for scholarly research results on CMM models.

¹² More information: <https://www.tmforum.org/digital-maturity-model-metrics>.

¹³ More information: <https://openroadscommunity.com/resources/introduction-open-digital-maturity-model-v2>.

¹⁴ More information: <https://www.forrester.com/report/The+Digital+Maturity+Model+50/-/E-RES136841>.

¹⁵ More information: <https://www.gartner.com/doc/3764382/introducing-gartner-digital-government-maturity>.

- the Planview Innovation Management Maturity Model¹⁶, which is based on the CMMI maturity levels and a breakdown of these across four categories (Strategy, People, Process and Tools), providing a list of characteristics for each combination of category and level;
- the Innovation Maturity Model by Berg Consulting¹⁷, which proposes two perspectives (strategic focus and capability focus) along which to consider innovation maturity;
- the Innovation Management Capability Maturity Test by Planbox¹⁸, an online self-check instrument for considering innovation capabilities along the dimensions of Strategy, People & Culture, Processes, Tools and Metrics.

One of the most complete approaches in this domain is the work of Corsi and Neau¹⁹ on an integrated Innovation Capability Maturity Model, which proposes such a model structured along a starting zero-maturity level and the following 5 levels (in ascending order of maturity):

1. Initial, corresponding to a product development project;
2. Repeatable, corresponding to some project capitalization, memory and know-how;
3. Coordinated, corresponding to projects coordinated between themselves and an overall controlled project for innovation;
4. Setting up innovation management, during which services and disciplines cross-influence each other;
5. Management of optimal innovation, during which innovation is fully integrated within organizational strategy.²⁰

Last but not least, it should be mentioned that, given the close relationship between standardization and maturity of innovation processes, international standardization bodies like CEN and ISO are also working in this area. In this respect,

- the CEN/TC 389 technical committee has produced, during 2013-2015, the CEN/TS 16555-1 to 7 series of standards on innovation management^{21,22}, whereas
- the ISO/TC 279 technical committee is working on the ISO 50500-50505 set of standards for innovation management which are currently (January 2018) under development²³.

C. A CONCEPT OF MATURITY IN THE IPTTM MODEL FOR PUBLIC SECTOR INNOVATION WORK

Considering the state of play discussed above in capability and maturity models for many different domains, including innovation, as well as the standardization work on innovation management by international bodies, the goal of deploying a Capability Maturity Model for Public Sector Innovation processes (a would-be ‘CMM-PSI’ model) can be envisaged. Still, in acknowledgement of the complexity of innovation efforts in public sectors, such a goal can clearly be only a long-term one, as it requires itself considerable work to mature, including building common understanding and consensus with the public sectors involved, as well as common commitment to a long-term investment for deploying, applying and validating such a model.

¹⁶ More information: <http://www2.planview.com/im3/docs/Planview-Innovation-Maturity-Model.pdf>.

¹⁷ More information: http://bergconsulting.com.au/_literature_144915/Innovation_Maturity_Model.

¹⁸ More information: <https://www.planbox.com/innovation-management-capability-maturity-test/>.

¹⁹ Corsi, P. and Neau, E. (2015). *Innovation Capability Maturity Model*. London, UK and Hoboken, NJ: ISTE Ltd and John Wiley & Sons, Inc.

²⁰ Level naming and description taken from Corsi & Neau (2015), pp.207-209.

²¹ More information available on the relevant CEN/TC 389 webpage,

https://standards.cen.eu/dyn/www/f?p=204:32:0:::FSP_ORG_ID,FSP_LANG_ID:671850,25&cs=1C854451790B954006838B674ED567E71.

²² The interested reader is also referred to a presentation on this work delivered during the UN ESCWA Workshop on Fostering Innovation in the Public Sectors of Arab Countries (30-31 October 2017, Cairo, Egypt) by Dr.

Awadh Alharbi, online available at <https://www.unescwa.org/events/fostering-public-sector-innovation-arab-region> (in Arabic).

²³ More information available on the relevant ISO/TC 279 webpage,

<https://www.iso.org/committee/4587737/x/catalogue/p/0/u/1/w/0/d/0>.

This goal, therefore, is not the objective of the IPTTM model presented in this technical report, which undertakes a more simple and controlled approach to maturity.

Building on what has already been presented above, it can be noted that the CMMI maturity levels, and the logic underlying them, point to an effort of repetitively improving, stabilizing, and re-improving, re-stabilizing a process so that it ultimately becomes more mature. This observation, coupled with the fact that any process (and especially so innovation processes, which by definition have to do with responding to some original issues) will inevitably involve some degree of improvisation in the first time that it is implemented, as well as after every major change that it undergoes in order to get stabilized again, allows to consider the CMMI meta-process for maturation of processes as a circular way of work, depicted in Figure 3.

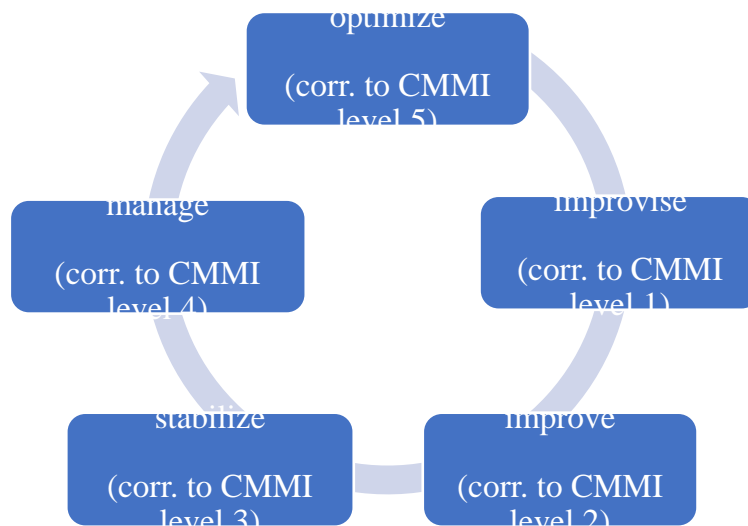


Figure 3. A circular view of the CMMI maturation meta-process, for improving processes from initial to optimized maturity.

Source: Consultant, original work for the study on Fostering Innovation in the Public Sectors of the Arab Region.

In Figure 3 above for a circular view of the CMMI maturation meta-process, just as in Figure 1 further above for a circular view of a maturation process in general, the circular arrow that connects all individual steps in each figure does not only denote their order, but also the fact that time elapses along their implementation or, more simply put, the fact that time is needed for these steps to be realized.

Clearly, if the time needed goes by without effort, no maturity results will be produced. Time, in this sense, is a factor necessary but not sufficient for maturity. Therefore, the availability of elapsed time does not automatically imply that maturity will be achieved. Still, the lack of elapsed time, would more often than not imply that maturity can not be achieved or, more simply put, freshly developed processes cannot be expected to be mature. An exception to this is for processes which are developed on the basis of accumulated experience, in which case they carry with them, in an implicit manner, the time elapsed before their launch that has allowed to accumulate the experience on which they build. Such experience-based processes, therefore, can become mature sooner after their initial development than processes not building on any experience at all.

In all these cases, time seems an important factor for maturity. On these grounds, an indirect way to study maturity (the latter remaining an abstract concept, which does not easily lend itself to closed definitions and strict measurements), would be to study the time elapsed (which is a much more concrete concept, that can be measured). In this line of thought, and assuming that the actors running a process always make good use of the time elapsing, two claims could be made:

- a “duration is good for maturity” claim, according to which a process which has evolved over a longer period of time could be expected to be more mature than a process which has evolved over a shorter period; and
- an “oldness is good for maturity” claim, according to which a process which has been completed before a longer period of time could be expected to be more mature than a process which has been completed more recently, and the latter could be expected to be more mature than a process which has not been completed yet.

It should be noted that the oldness claim above has certain limits, as it is based on the assumption that long-ago-finished processes still continue to accumulate experience, which is less and less the case as we go further in the past. In this respect, this claim needs to be counter-balanced with a claim placing positive value on the youngness, rather than the oldness of a process.

On the basis of this reasoning, a design choice of the IPTTM model for public sector innovation efforts has been to integrate into this model a notion of maturity for PSI efforts not in the sense of their maturation according to CMMI levels (which is quite difficult to deduce safely), but in the sense of their time aspects, i.e. their duration and their oldness/youngness with respect to the present (which can be safely known). This design choice has a number of positive implications, as it allows to:

- handle and study an aspect of public sector innovation efforts (time maturity) which can be objectively measured, based on information which can be known;
- use this time maturity aspect as an indication of the expected essential maturity of an innovation effort, in the common sense of the term maturity discussed above; and
- perform various types of longi- and latitudinal analysis across sampled sets of innovation efforts, as described in the following chapters, which provide indications for the maturation (in the CMMI sense of the term) of the overall innovation processes of the public sectors involved.

This time maturity aspect is defined in a more formal way, using a mathematical formula, in the chapter that follows, as the *fresh maturity* metric of the IPTTM model.

At the same time, this aspect, together with a set of process type aspects of public sector innovation efforts included in the IPTTM model, allows to study these efforts in a systematic way, when the IPTTM model is used as an analysis instrument, as well as to plan such efforts in a systematic way, when the IPTTM model is used as a design choice tool (for more information on these uses of the model please refer to the chapters that follow).

In this respect, the IPTTM model, through its time maturity and process type aspects for public sector innovation efforts, can be used to study and manage such efforts across all steps of their lifecycle. Thus, systematic use of the IPTTM model along the different scenarios described in the chapters that follow can be considered to contribute to the maturation (in the CMMI sense of the term) of the overall innovation portfolio and innovation process of the public sectors involved.

II. THE IPTTM MODEL FOR PROCESS TYPE AND TIME MATURITY CHARACTERISTICS OF PUBLIC SECTOR INNOVATION EFFORTS

D. INTRODUCTORY NOTES

This chapter presents the IPTTM conceptual model, which has been developed as original work in the context of the study on Fostering Innovation in the Public Sectors of the Arab Region, as a methodological instrument for systematically exploring process type and time maturity characteristics of public sector innovation efforts.

The IPTTM model comprises a multi-dimensional conceptual construct, encompassing 12 dimensions in total as follows:

- a first dimension for studying the time maturity of public sector innovation efforts, namely the amount of lifetime that these efforts have accumulated at a given point, coupled with the amount of time elapsed since their completion (set to zero for efforts ongoing at the time of study);
- a set of ten more dimensions for studying a spectrum of process type characteristics of public sector innovation efforts, including their correspondence to common innovation process paradigms as well as a series of other aspects regarding their enactment and outcomes;
- a last but in no case least twelfth dimension for studying the afference, in terms of relatedness and contribution, of public sector innovation efforts to the agenda of Sustainable Development Goals that has been adopted by the United Nations General Assembly.

The sections that follow present the different dimensions of the IPTTM model and the metrics used for studying innovation efforts along each dimension. The chapter is concluded with a final section discussing how the IPTTM model may serve the twofold purpose of (a) exploring a given sample of innovation efforts and (b) identifying gaps of innovation types for which further knowhow and efforts may be needed.

E. DIMENSION 1: TIME MATURIT

This dimension denotes the amount of lifetime that a public sector innovation effort has accumulated at a given point of study, coupled with the amount of time elapsed since its completion (set to zero for efforts ongoing at the time of study).

To study a given sample of public sector innovation efforts along this dimension, the following metrics apply to each individual effort sampled:

launch year

This metric is calculated as the calendar year in which the effort has been launched.

completion year

This metric is calculated as the calendar year in which the effort has been completed, or as the current calendar year for efforts ongoing at the time of study.

launch age

This metric is calculated as the difference between the current calendar year and the launch year of the effort. For efforts having been launched within the current calendar year, *launch age* equals to 0.

completion age

This metric is calculated as the difference between the current calendar year and the completion year of the effort. For efforts having completed within the current calendar year, or efforts currently ongoing, *completion age* equals to 0.

fresh maturity

This metric conveys the idea that the efforts particularly interesting are those with a lifetime adequately fresh and at the same time adequately mature at the time of study.

This metric is calculated according to the formula

$$\min(\text{launch age}, 5) - \text{completion age} + 1 + (\max(\text{launch age} - (5+1), 0) * 0.5)$$

using the *launch age* and *completion age* metrics as defined above. This formula allows to consider into *fresh maturity* all years during the last 5-year freshness timeframe in which the effort under study was alive, plus any previous years during which the effort was alive taken into consideration with a contribution adjusted by a 0.5 oldness factor. The 5-year freshness timeframe can be narrowed down to 1 / broadened to values greater than 5, and the 0.5 oldness factor can be decreased down to 0.0 / increased up to 1.0, to allow different versions of this metric that may consider freshness as, respectively, more/less important in comparison to maturity than in the version of the metric proposed above.

As a final note on the time maturity dimension of the IPTTM model as defined in the above, it is clear that the *launch age*, *completion age* and *fresh maturity* metrics above, which are all calculated at the time of study of some given innovation efforts taking into account the current time (current calendar year) as reference standpoint, are by definition dynamic in nature and evolve with elapsed time. The *launch age* of a given innovation effort clearly increases over time; the *completion age* of an innovation effort is kept to zero for as long as this effort is ongoing and, following that, starts to increase over time; and consequently, the *fresh maturity* of an innovation effort is kept high for a first time window following its launch and lasting until its completion, and then starts to gradually decrease as the completion of this effort moves over time further and further in the past. All in all, the aggregate fresh maturity of a sample of innovation efforts which gradually complete and are not renewed with launching of new efforts will be kept high as long as the initial efforts are alive and evolving, and then gradually commence to decrease as these efforts are completed and not renewed with new initiatives.

F. DIMENSION 2: MODALITY

This dimension denotes the organizational layer and path from which the idea of an innovation effort is conceived and communicated towards other layers.

In order to study a given sample of public sector innovation efforts along this dimension, the following metrics apply to each individual effort sampled:

modality

This metric takes up the following values:

top-down, for efforts conceived at higher responsibility and authority levels of the organizational structure and communicated downwards along organizational layers for enactment; and

bottom-up, for efforts conceived at lower responsibility and authority levels of the organizational structure and communicated upwards along organizational layers for approval.

m-scarcity

This metric is calculated as

I , for innovation efforts having more scarce types of modality within the sample studied; and

0 , otherwise.

The value of this rating is clearly dependent upon / specific to a given sampling of innovation efforts under study. Consequently, use of this metric is legitimate for comparing innovation efforts within the same sample only, rather than for performing cross-sample comparisons.

It can be noted that this metric is defined in an information-theoretic mindset, treating the scarcity of data values as an indication of low probability and therefore as a measure of the information that they actually convey (using the term information, in this case, in its information theory sense)²⁴. In this mindset, the binary 1/0 scarcity rating proposed above could be adjusted to more fine grain values, considering for instance the exact frequency of a data value within a given sample, expressed as a percentage of occurrences of this data value within the sample size. Such adjustments are theoretically possible, yet they require caution as they are exposed to the risk of over-analyzing / over-quantifying data values whose derivation is subject to expert judgment and information completeness limitations, rather than objective measurements.

At the same time, this scarcity metric is proposed in an economic-theoretic mindset, considering scarcity as quality that is closely related to the potential price and, most importantly, to the potential value of something.²⁵ Indeed, beyond nature-made creations that may be more scarce than others, up to rarity (e.g. rare gems, rare-earth elements), and thus acquire increased market price because of extremely low supply with respect to demand, human-made artifacts which are scarce because of non-circumstantial, inherent reasons, having to do with the difficulty or complexity of producing them, may have a very high value of use, and at the same time a very high value as examples and sources of lessons learnt. Transferring this discussion back to the context of the present study, public sector innovation efforts which have more scarce characteristics because the latter are more difficult to achieve, may serve as valuable examples and sources of understanding for innovation work in general, thus the rationale behind proposing this scarcity metric.

G. DIMENSION 3: PERMEABILITY

This dimension denotes the extent to which the group of people contributing to the innovation process, and in particular to idea generation and idea evaluation activities, is defined in a more static and structured manner or along more dynamic and organic terms, being allowed in the latter case to be permeated by newcomers over time and/or external contributors across organizational boundaries.

In order to study a given sample of public sector innovation efforts along this dimension, the following metrics apply to each individual effort sampled:

permeability

This metric takes up the following values:

²⁴ The interested reader is referred to the Wikipedia article on Information Theory, online available at https://en.wikipedia.org/wiki/Information_theory, for a broader presentation of the concepts of information, probability, entropy and other important ideas put forward in the work of Claude Shannon and other researchers.

²⁵ The interested reader is referred to sources such as Richard L. Porter's article on "Scarcity" in *Economic Theory and Policy (Social Science*, 40(1), January 1965, pp.22-30, online available at <https://www.jstor.org/stable/41885066>), as well as to more recent discussions on the relationship between and the political economy implications of scarcity and abundance, such as the one provided in a P2P Foundation Wiki article online available at http://wiki.p2pfoundation.net/Abundance_vs._Scarcity.

impermeable, in case of efforts for which the people to source and evaluate ideas are preselected on an individual profile basis and stable throughout the process, the latter being communicated to them in terms of assignment;

collaborative, in case of efforts for which the people to source and evaluate ideas are prescribed on a broader organizational role/layer basis, and selected later on during the process, the latter being communicated to them in terms of importance to participate; and

open, in case of efforts for which the people to source and evaluate ideas are prescribed in terms of minimum profiles that are also met beyond organizational boundaries by external contributors, to present themselves without formal commitments at any stage during the process, the latter being communicated to them in terms of opportunity to shape solutions.

b-scarcity

This metric is calculated as

I, for innovation efforts having more scarce types of permeability within the sample studied; and

0, otherwise.

The value of this rating is clearly dependent upon / specific to a given sampling of innovation efforts under study. Consequently, use of this metric is legitimate for comparing innovation efforts within the same sample only, rather than for performing cross-sample comparisons.

Moreover, it can be noted that the remarks for the information-theoretic interpretation of scarcity metrics of process type dimensions discussed in the previous also hold true for this scarcity metric as well.

H. DIMENSION 4: DISRUPTIVENESS

This dimension denotes the aggregate volume, pace over time and complementarity/replacement sign of the changes in the workings of the public sector that an innovation effort is intended to bring about.

In order to study a given sample of public sector innovation efforts along this dimension, the following metrics apply to each individual effort sampled:

disruptiveness

This metric takes up the following values:

non-disruptive, for efforts that meet two or more of the following characteristics: (a) they bring forward small changes with minimized lateral effects, (b) they do so at a slow pace over time, and (c) they establish new ways of work complementary or symbiotic to existing ones, allowing a convenient tentative timeframe for the latter to become abandoned after the test of time;

disruptive, for efforts that meet two or more of the following characteristics: (a) they bring forward large changes and/or changes with large lateral effects, (b) they do so at a fast (with respect to the size of changes) pace over time, and (c) they establish new ways of work in replacement of existing ones, setting a fixed and possibly pressing, always with respect to the size of changes timeframe for the latter to become abandoned; and

semi-disruptive, for efforts that fall in-between the previous cases, especially in terms of the timeframe that they allow for change, or otherwise said in terms of the speed of change that they demand.

t-scarcity

This metric is calculated as

1 , for innovation efforts having more scarce types of disruptiveness within the sample studied; and
 0 , otherwise.

The value of this rating is clearly dependent upon / specific to a given sampling of innovation efforts under study. Consequently, use of this metric is legitimate for comparing innovation efforts within the same sample only, rather than for performing cross-sample comparisons.

Moreover, it can be noted that the remarks for the information-theoretic interpretation of scarcity metrics of process type dimensions discussed in the previous also hold true for this scarcity metric as well.

I. DIMENSION 5: FOCALITY

This dimension denotes the eventual conception of an innovation effort around some specific types of needs and issues upgraded to focal point status.

In order to study a given sample of public sector innovation efforts along this dimension, the following metrics apply to each individual effort sampled:

focality

This metric takes up the following values:

local, for innovation efforts explicitly focused on improving a specific local administration or community, taking stock of elements unique to the corresponding local geography and context;

frugal, for innovation efforts explicitly focused on bringing forward small-sized and low-cost changes that may have a multiplier effect and/or desirable impacts positively disproportionate to the budget and resource consumptions that they demand;

tool-novel, for innovation efforts explicitly focused on exploring the meaningful and fruitful use of novel information technology tools, that bring along the promise and potential of making public sector processes and services much better, and/or giving rise to new processes and services that were not possible before;

gender, for innovation efforts explicitly focused on establishing equality for gender minorities and/or genders with unrecognized rights and/or lowered opportunities;

children, for innovation efforts explicitly focused on establishing rights and practical opportunities for the well-being of children or specific children groups;

social, for public sector innovation efforts explicitly focused at helping create or synergizing with existing social innovation, social entrepreneurship and social solidarity efforts;

democratic, for public sector innovation efforts explicitly focused at helping create new or improving existing schemes for democratic participation and governance;

multiple, in cases of public sector innovation efforts with more than one focal points from the above or other analogous; and

generic, in cases of public sector innovation efforts with no explicit focal points of the above or other analogous.

f-scarcity

This metric is calculated as

1, for innovation efforts having more scarce types of focality within the sample studied, with the exception of those having *generic* focality; and

0, otherwise (and for those having *generic* focality).

The value of this rating is clearly dependent upon / specific to a given sampling of innovation efforts under study. Consequently, use of this metric is legitimate for comparing innovation efforts within the same sample only, rather than for performing cross-sample comparisons.

Moreover, it can be noted that the remarks for the information-theoretic interpretation of scarcity metrics of process type dimensions discussed in the previous also hold true for this scarcity metric as well.

J. DIMENSION 6: HOPEFULNESS

This dimension denotes the ambition for innovativeness, taken to mean an established set of mind, capabilities and processes for repetitive innovation that an effort may intend to bring forward.

In order to study a given sample of public sector innovation efforts along this dimension, the following metrics apply to each individual effort sampled:

hopefulness

This metric takes up the following values:

one-off, in cases of efforts that focus on effectively deploying a specific innovation and curating this in the future, without setting explicit objectives for further innovativeness;

continuous, for efforts targetted at effectively deploying a specific innovation and enhancing it with further innovative aspects, through processes that continue along a meaningful timeframe in the future; and

sustainable, for efforts that without or beyond focusing at deploying a specific innovation, are more targeted at establishing material and/or immaterial conditions necessary and sufficient in order to create an innovation process without foreseen end, that will generate innovations and inform, motivate, improve and re-fuel itself through the innovations produced already, in order to advance by regenerating the resources that it consumes.

h-scarcity

This metric is calculated as

1, for innovation efforts having more scarce types of hopefulness within the sample studied; and

0, otherwise.

The value of this rating is clearly dependent upon / specific to a given sampling of innovation efforts under study. Consequently, use of this metric is legitimate for comparing innovation efforts within the same sample only, rather than for performing cross-sample comparisons.

Moreover, it can be noted that the remarks for the information-theoretic interpretation of scarcity metrics of process type dimensions discussed in the previous also hold true for this scarcity metric as well.

K. DIMENSION 7: DIRECTEDNESS

This dimension denotes the direction in which an effort develops itself internally within the public sector viewed landscape-wise.

In order to study a given sample of public sector innovation efforts along this dimension, the following metrics apply to each individual effort sampled:

directedness

This metric takes up the following values:

horizontal, for efforts aiming at implementation and/or impact public sector-wide; and

vertical, for efforts targeted at implementation and/or impact in specific domains.

d-scarcity

This metric is calculated as

I, for innovation efforts having more scarce types of directedness within the sample studied; and

0, otherwise.

The value of this rating is clearly dependent upon / specific to a given sampling of innovation efforts under study. Consequently, use of this metric is legitimate for comparing innovation efforts within the same sample only, rather than for performing cross-sample comparisons.

Moreover, it can be noted that the remarks for the information-theoretic interpretation of scarcity metrics of process type dimensions discussed in the previous also hold true for this scarcity metric as well.

L. DIMENSION 8: INTENTIONALITY

This dimension denotes the kind of one-off and/or persistent outcomes that an innovation effort is intended to deliver and/or establish.

In order to study a given sample of public sector innovation efforts along this dimension, the following metrics apply to each individual effort sampled:

intentionality

This metric takes up the following values:

institutions and structures, for efforts intended to establish institutions and/or organizational structures that help innovation;

policies and standards, for efforts intended to establish policies and/or standards that help innovation;

practices and guidelines, for efforts intended to create innovative/exemplar practices and/or practice guidelines; and

systems and services, for efforts intended to create innovative information systems, applications, platforms and/or services.

i-scarcity

This metric is calculated as

1, for innovation efforts having more scarce types of intentionality within the sample studied; and

0, otherwise.

The value of this rating is clearly dependent upon / specific to a given sampling of innovation efforts under study. Consequently, use of this metric is legitimate for comparing innovation efforts within the same sample only, rather than for performing cross-sample comparisons.

Moreover, it can be noted that the remarks for the information-theoretic interpretation of scarcity metrics of process type dimensions discussed in the previous also hold true for this scarcity metric as well.

M. DIMENSION 9: DRIVENNESS

This dimension denotes the major reality that drives the rationale and realization of a public sector innovation effort.

In order to study a given sample of public sector innovation efforts along this dimension, the following metrics apply to each individual effort sampled:

drivenness

This metric takes up the following values:

crisis-based, for efforts targeted at providing response to current and/or future urgencies, technical/natural catastrophes and/or crises;

needs-based, for efforts targeted at providing response to recurring and/or upcoming regular needs of citizens, businesses and other public sector beneficiaries; and

opportunity-based, for efforts intended to take stock of current and/or future opportunities, uptake emerging technologies and/or keep up with developments and advancements from model players in a forward-thinking approach.

v-scarcity

This metric is calculated as

1, for innovation efforts having more scarce types of drivenness within the sample studied; and

0, otherwise.

The value of this rating is clearly dependent upon / specific to a given sampling of innovation efforts under study. Consequently, use of this metric is legitimate for comparing innovation efforts within the same sample only, rather than for performing cross-sample comparisons.

Moreover, it can be noted that the remarks for the information-theoretic interpretation of scarcity metrics of process type dimensions discussed in the previous also hold true for this scarcity metric as well.

N. DIMENSION 10: PARTENARIALITY

This dimension denotes the composition of the major partnership that organically (taken to mean, with each partner in sine qua non status during the realities of implementation) realizes a public sector innovation effort.

In order to study a given sample of public sector innovation efforts along this dimension, the following metrics apply to each individual effort sampled:

partenariality

This metric takes up the following values:

public sector-internal, for cases of public sector agencies partnering with other public sector agencies of the same national administration or not partnering with any other stakeholder at all (in the case of purely in-sourced internally-focused efforts);

public-local, for cases of public sector agencies partnering with local administrations or other local stakeholders of any type;

broader public, for cases of public sector agencies partnering with legal entities under public law, such as academic or health institutions;

public-social, for cases of public sector agencies partnering with civil society organizations, non-governmental organizations and social innovation networks at the national or international level;

public-private, for cases of public sector agencies partnering with private industry, commerce, services or financing sector players;

cross-country, for cases of public sector agencies or public administrations partnering with peer agencies or administrations from other countries;

public-international, for cases of public sector agencies partnering with international organizations, supra-national institutions or thematic networks world-wide; and

multilateral, for combinations of the previous cases.

p-scarcity

This metric is calculated as

1, for innovation efforts having more scarce types of partenariality within the sample studied; and

0, otherwise.

The value of this rating is clearly dependent upon / specific to a given sampling of innovation efforts under study. Consequently, use of this metric is legitimate for comparing innovation efforts within the same sample only, rather than for performing cross-sample comparisons.

Moreover, it can be noted that the remarks for the information-theoretic interpretation of scarcity metrics of process type dimensions discussed in the previous also hold true for this scarcity metric as well.

O. DIMENSION 11: ROOTEDNESS

This dimension denotes the institutional type of the root entity that effectively defines and owns a public sector innovation effort.

In order to study a given sample of public sector innovation efforts along this dimension, the following metrics apply to each individual effort sampled:

rootedness

This metric takes up the following values:

central government (CG), for efforts defined and owned by state leadership or central government at the top national level;

public administration (PA), for efforts defined and owned by top-level public sector branches (e.g. ministries, independent public authorities) and public administration agencies;

local administration (LA), for efforts defined and owned by local administrations such as regional and municipal authorities and agencies; and

under public law (UPL), for efforts defined and owned by legal entities under public law, such as academic institutions, health institutions, water/food/energy/transport security authorities, public banking system institutions and other analogous.

r-scarcity

This metric is calculated as

1, for innovation efforts having more scarce types of rootedness within the sample studied; and

0, otherwise.

The value of this rating is clearly dependent upon / specific to a given sampling of innovation efforts under study. Consequently, use of this metric is legitimate for comparing innovation efforts within the same sample only, rather than for performing cross-sample comparisons.

Moreover, it can be noted that the remarks for the information-theoretic interpretation of scarcity metrics of process type dimensions discussed in the previous also hold true for this scarcity metric as well.

P. DIMENSION 12: AFFERENCE

This dimension denotes the relatedness of a public sector innovation effort with and contribution of this effort to the United Nations Sustainable Development Goals (SDGs), as the latter have been formally adopted by the United Nations General Assembly on September 2015.²⁶

In order to study a given sample of public sector innovation efforts along this dimension, the following metrics apply to each individual effort sampled:

affERENCE

This metric is encoded according to the official UN SDG nomenclature, taking up the following values:

SDG.1 no poverty;

SDG2. zero hunger;

SDG3. good health and well-being;

SDG4. quality education;

SDG5. gender equality;

SDG6. clean water and sanitation;

SDG7. affordable and clean energy;

SDG8. decent work and economic growth;

SDG9. industry, innovation and infrastructure;

SDG10. reduced inequalities;

SDG11. sustainable cities and communities;

SDG12. responsible consumption and production;

SDG13. climate action;

SDG14. life below water;

SDG15. life on land;

SDG16. peace, justice and strong institutions;

SDG17. partnerships for the goals;

combinations of the above, in case of affERENCE to multiple SDGs at the same time; and

²⁶ Cf. webpages <http://www.un.org/sustainabledevelopment/sustainable-development-goals/> and http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E.

none, in case of no afferece to any of the United Nations SDGs.

a-scarcity

This metric is calculated as

I, for innovation efforts having more scarce types of afferece within the sample studied, with the exception of those having *none* afferece; and

0, otherwise (and for those having *none* afferece).

The value of this rating is clearly dependent upon / specific to a given sampling of innovation efforts under study. Consequently, use of this metric is legitimate for comparing innovation efforts within the same sample only, rather than for performing cross-sample comparisons.

Moreover, it can be noted that the remarks for the information-theoretic interpretation of scarcity metrics of process type dimensions discussed in the previous also hold true for this scarcity metric as well.

Q. GUIDELINES AND CONSIDERATIONS FOR USING THE IPTTM MODEL AS AN ANALYSIS INSTRUMENT FOR PUBLIC SECTOR INNOVATION EFFORTS

The IPTTM model described above for studying and analyzing samples of public sector innovation efforts has been developed in a blended approach for model generation, combining

- a grounded theory paradigm²⁷, abstracting the model dimensions and values from characteristics of the innovation efforts that have been contributed by public sectors of UN ESCWA member countries by responding to a relevant questionnaire that has been prepared and circulated in the context of the study on *Fostering Innovation in the Public Sectors of the Arab Region* (the set of 29 innovation efforts contributed by public sector respondents has served for developing the IPTTM model), and of additional innovation efforts sampled from the Knowledge Base of UN Public Service Awards Initiatives²⁸ (the set of 40 additional innovation efforts sampled has served for adjusting and completing this model) and performing successive rounds of open, axial and selective coding until saturation²⁹; and

²⁷ The grounded theory research approach is an inductive one, based on the idea that an effective way to make theory fit to data (rather than attempting the opposite), is to have theory derived from the very data that it attempts to study. A nice working definition of the Grounded Theory approach can be found on the relevant Wikipedia article, according to which “*Grounded theory (GT) is a systematic methodology in the social sciences involving the construction of theory through methodic gathering and analysis of data.*” [1][2][3] *Grounded theory is a research methodology which operates inductively, in contrast to the hypothetico-deductive approach. A study using grounded theory is likely to begin with a question, or even just with the collection of qualitative data. As researchers review the data collected, repeated ideas, concepts or elements become apparent, and are tagged with codes, which have been extracted from the data. As more data is collected, and re-reviewed, codes can be grouped into concepts, and then into categories. These categories may become the basis for new theory. Thus, grounded theory is quite different from the traditional model of research, where the researcher chooses an existing theoretical framework, and only then collects data to show how the theory does or does not apply to the phenomenon under study.*[4]” ([1] Patricia Yancey Martin & Barry A. Turner, "Grounded Theory and Organizational Research," *The Journal of Applied Behavioural Science*, vol. 22, no. 2 (1986), 141. [2] Faggiolani, C. (2011). "Perceived Identity: applying Grounded Theory in Libraries". *JLIS.it*. University of Florence. 2 (1). doi:10.4403/jlis.it-4592. Retrieved 29 June 2013. [3] Strauss, A., & Juliet, C. (1994)). *Grounded Theory Methodology: An Overview*. In N. Denzin & Y. Lincoln *Handbook of Qualitative Research*. 1st ed. (pp. 273–284). [4] G. Allan, "A critique of using grounded theory as a research method," *Electronic Journal of Business Research Methods*, vol. 2, no. 1 (2003) pp. 1-10.)

Further information and resources on the grounded theory approach may be found in sources such as the Grounded Theory Institute website (<http://www.groundedtheory.com>), the Grounded Theory topic on Science Direct (<https://www.sciencedirect.com/topics/neuroscience/grounded-theory>), and others.

²⁸ Online browsable at <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases>.

²⁹ As these terms are defined in the relevant literature, cf. <http://www.qualres.org/HomeGrou-3589.html>.

- the theory already available in the relevant literature on established paradigms and types of innovation processes.

Application of this conceptual model in practice is subject to a number of limitations, as should be expected for all models of this sort. The most important of these are that

- (a) firstly, characterization of innovation efforts along the model dimensions requires the availability of sufficient and validated information, as well as the exercise of expertise and judgment to avoid subjectivity and other cognitive biases; this restricts applicability of this model to cases of innovation efforts documented at appropriate quality and completeness
- (b) secondly, the scarcity metrics proposed for all process type dimensions (dimensions 2 to 12 above) are only meaningful for samples of adequate size, while at the same time large sample size calls for increased person effort in order to properly evaluate the process type dimensions and associated scarcity metrics.

These practical considerations should be kept in mind during the collection and preparation of innovation effort samples on which to apply this model of analysis.

Apart from that, it should be noted that the different values defined for each of the 11 process type dimensions of the IPTTM model, which are more or less independent from one another, nominally create a probability space of approx. 6.3 million theoretically possible combinations of process type values, of which only a very small fraction, in an estimated order of magnitude not greater than 10^2 , should be expected to appear in practice.

Still, the number of different dimensions included in this model allows to analyze innovation efforts from a number of different perspectives like, for instance:

1. using the absolute launch year and completion year/ongoingness data of these efforts as input feeding a longitudinal analysis of their evolution over time; such an analysis can be made at the year level or along more coarse-grain timeframes (e.g. 3-year timeframes starting from the current year backwards), and may be intended to identify recurring patterns, explore cause and effect relationships, or simply report on the uptake of innovation efforts within an overall race to the top approach;
2. combining such a longitudinal analysis with a latitudinal one as well, by studying evolution of innovation efforts over time across different countries, as well as across different process dimensions of the IPTTM model defined above;
3. looking along the time maturity dimension of sampled innovation efforts for efforts particularly fresh, particularly mature, or particularly fresh and mature at the same time;
4. focusing the interest of analysis along any specific one of the 11 process type dimensions defined above, from exploring the top-down/bottom-up modality of innovation efforts all the way to analyzing their afference to SDGs; and
5. focusing the interest of analysis on innovation efforts of a specific type along any one of the 11 process type dimensions (e.g. efforts bottom-up in terms of modality, open in terms of permeability, gender-focused in terms of focality, systems and services-oriented in terms of intentionality, and so on), as well as in combinations of these (e.g. open gender-focused innovation efforts, and so on).

It should be noted that the outcomes of the above types of analysis can be accumulated over time, as an information layer of added value over repositories of innovation effort examples available to public sectors.

It is worth noting, moreover, that the innovation effort collections that may be analyzed in this way are not necessarily only those jointly contributed by and shared across different collaborating public sectors. An additional possibility, for public sectors active in innovation efforts, would be to build up their own internal repositories of such efforts and analyse them in this way, as part of an internal learning and reflection exercise that points to building capacities for repetitive, continuous and ultimately sustainable innovation.

Last but not least, an equally important manner in which this type of analysis can be helpful, is to focus the study of a given innovation sample not so much on the process types present in, but rather on the process types

absent from the sample, which can be considered as more interesting exactly because of their absence or rareness. The information-theoretic scarcity metrics described above for all process type dimensions of the IPTTM model are instrumental for such an exercise, which may focus on

6. identifying scarce process types from those present along any specific dimension, and using the corresponding innovation examples as sources to gain more insight; on
7. identifying innovation examples interesting in terms of scarcity, i.e. examples corresponding to scarce process types along more than one dimensions, and again using them as sources to gain more insight; as well as on
8. identifying process types scarce or absent from the available sample, and use these findings as background information for a gap analysis, to infer innovation process types on which examples need to be sought and operational capacity needs to be built.

It is worth noting, to conclude this discussion, that the IPTTM model is indeed used within the *Fostering Innovation in the Public Sectors of the Arab Region* study along the threefold perspective described above, as an instrument for

- (a) performing a longitudinal/latitudinal analysis of the innovation efforts sampled from Arab Region countries;
- (b) identifying, from the innovation efforts sampled, efforts of particular interest due to their time maturity and/or process type characteristics; as well as
- (c) performing, over the innovation efforts sampled, a gap analysis for scarce process types for which further examples of public sector innovation efforts are sought.

At the same time, the IPTTM model is provided in itself as an outcome of the study, not only for reasons of making the study methodology transparent but also, and even more importantly, as an instrument that may help public sectors active in innovation for further studying, reflecting on and setting priorities for, their own efforts.

R. GUIDELINES AND CONSIDERATIONS FOR USING THE IPTTM MODEL AS A DESIGN CHOICE TOOL FOR PUBLIC SECTOR INNOVATION EFFORTS

As one more aspect of the applicability of the IPTTM conceptual model, it is worth noting that this model may also be used, beyond analyzing existing public sector innovation efforts, in the context of designing new ones as well.

Indeed, the different dimensions of the model as already described above can be used at appropriate stages during the ideation process for new innovation efforts, to identify characteristics of the latter that correspond to design choices which might otherwise go unnoticed. In this respect:

The *modality* dimension can be used to create a choice point for the ideation team on whether the effort under design should best be conceived as a top-down or bottom-up one. In the latter case, people from lower levels of the organizational pyramid would need to join, and in fact drive, the design process.

The *permeability* dimension can be used to create an explicit choice point for the ideation team on whether the effort under design should be conceived as an impermeable, collaborative or open one. In the latter case, the design process should explicitly provide at least one stage for opening up to public ideation and evaluation of the ideas already in place.

The *disruptiveness* dimension can be used to create an explicit choice point for the ideation team on whether the effort under design would bring forward non-disruptive, disruptive or semi-disruptive changes. In the case of disruptive changes, the risks inherent in the corresponding innovation process type should be taken into account early on during the process.

The *focality* dimension can be used to create explicit design choice points for the potential special focus that the innovation effort currently under design might uptake (e.g. focus on gender, focus on novel tools, and so on), which could otherwise go unnoticed. In this way, new innovation ideas can come into the picture, whereas existing ones can be extended / specialized to specific needs and opportunities.

The *hopefulness* dimension can be used to identify as an explicit choice point the ambition to make this effort a one-off, continuous or sustainable one. In each case, the corresponding rationale, critical success factors, risks and promises need to be taken into account, which clearly creates a more informed ideation process.

The *directedness* dimension can be used to create a design choice point for keeping this effort vertical to some specific domain, or considering to extend it horizontally in a public sector-wide manner. In the latter case, the need for opening the ideation team up to stakeholders from other branches, and the need to ensure scalability in the rollout process of the implemented innovation would have to be considered.

The *intentionality* dimension can be used to create design choices as to whether the innovation effort, no matter of its initial intention on institutions and structures, policies and standards, practices and guidelines, systems and services may need to extend in more components from this list. In this way, needs for extending design and changes at different levels can be early identified, thus ensuring a more cohesive implementation plan.

The *drivenness* dimension can be used to bring forward potential for making the innovation effort better inclusive of different scenarios. For instance, innovation efforts driven by needs can benefit from also considering eventual crises that may affect these needs, whereas innovation efforts driven by crises can also consider turning these crises, and the emergencies incurred, into occasions for forward thinking and making changes that will allow to face current crises, on the one hand, and become prepared to grasp future opportunities, on the other.

The *partenariability* dimension can be used to identify choices for important partners (private sector, social, cross-country and other cases) that may be necessary for the innovation effort under design to become realized, as well as for partners that, although not required for realization of the innovation effort in its basic implementation, might still be instrumental for further diffusing it and extending it with scope and sustainability.

The *rootedness* dimension can be used to identify choices as to the level and specific institution at which the innovation effort should be owned. This important aspect risks to go unnoticed in many cases where the ideation team has been formed by innovation proponents and stakeholders outside the organization that would normally need to own the innovation process, thus making it important to be able to identify and integrate this organization in the process at an early stage.

Last but not least, the *afferece* dimension can be used to bring forward explicit design choices for integrating, or not integrating, this innovation effort to specific sustainable development goals and subgoals.

In light of the above, considering the dimensions of the IPTTM model as choice points during ideation is an approach that can improve both the ideation process and the design process of innovation efforts, leading to innovation efforts more inclusive of all appropriate stakeholders and final innovations better suited to needs and opportunities.

Still, it should be noted that public sectors interested to use the IPTTM model as a design choice tool for their innovation work should keep in mind that the purpose of this model is to help, and in no case replace, human intelligence and ingenuity, especially in a domain as inherently complex as that of innovation, and as practically complicated due to external factors and constraints as that of public sectors. In this respect, the IPTTM model could be used as a design choice tool more in the sense of bringing forward questions that need answers, rather than as itself pointing to the best answer for each such question.

The value of the model as a design choice tool, therefore, lies in providing a systematic way to ensure that

- all choice points are brought forward in due time, without any such points left unnoticed;, and that
- all choices are made explicitly and discussed rationally within the design team, without any such choices being implicitly made or left to be forced by external realities and discovered later on during implementation, when it may be too late or too costly to amend them should the innovation workers so wish.

S. I⁷: TOWARDS AN INTEGRATED METHODOLOGICAL FRAMEWORK FOR PUBLIC SECTOR INNOVATION WORK

It can be noted that the approach of using the IPTTM model as a design choice tool for innovation efforts cross-references with the IPEG empirical guide and the EIP wizard (cf. the corresponding chapters of the study) for considering the different applicability characteristics of innovation process types that IPTTM dimensions may point to. Moreover, this approach also cross-references with the IDEA lifecycle for public sector innovation efforts (cf. the corresponding chapters of the study), given that ideation is explicitly acknowledged as the first phase of the IDEA lifecycle, and the activity and tool categories prescribed for this phase can be used to accommodate ideation thinking and choices in terms of the IPTTM model dimensions.

At the same time, this approach is also cross-referencing with the IKRx and ITOCIx methodological exercises that have been developed in the context of the study (cf. the corresponding annexes) for identifying, respectively, knowledge resources for innovation in general and public sector innovation in particular, as well as competitive intelligence sources for know-how and technologies that can be used in the implementation of public sector innovation and digital transformation projects.

Last but not least, the IPTTM model has interesting cross-references with the I-unLoC list of challenges that have been identified in the context of the study (cf. the corresponding chapter) for public sector innovation work, given that these challenges can be used as one more starting point, together with IPTTM-based gap analysis and design choice points, for generating ideas for innovation work, as well as for assessing the interest of such ideas and the value of the outcomes of innovation implementations.

In this respect, this spectrum of methodological instruments, namely

- the I-unLoC list of challenges for public sector innovation;
- the IPTTM model for analyzing existing/designing new public sector innovation efforts ;
- the IPEG empirical guide and the EIP wizard for fitting innovation process types;
- the IKRx and ITOCIx methodological exercises for public sector innovation resources; and
- the IDEA lifecycle for public sector innovation efforts

could be combined in an integrated framework (code-named I⁷, from its constituent components) for (a) fostering and (b) guiding public sector innovation work.

Such a framework, in order to remain practical and effective, could best be structured around the IDEA lifecycle for public sector innovation projects, as this is the component more closely linked to the actual implementation of the latter. In this respect, the Ideation, Deliberation, Evolution and Assimilation phases of the IDEA lifecycle can be linked to usage of the rest of the I⁷ framework components. More specifically:

- the I-unLoC list of challenges can be used as a departing point for the Ideation phase, in order to foster idea generation, as well as a returning point for the Assimilation phase, in order to help assessment of outcomes (with the rationale that there is value in meeting some recognized challenges);
- the IPEG empirical guide and the EIP wizard can be used for the Deliberation phase of the lifecycle, in order to help identify the innovation process types best suited and the stakeholders to be involved for the rest of the effort;
- the IKRx methodological exercise can be used both for all phases of the IDEA lifecycle, to identify resources that can help with idea generation (in the Ideation phase), stakeholder engagement (in the

Deliberation phase), implementation issues (in the Evolution phase) as well as assessment (in the Assimilation phase);

- the ITOCIx methodological exercise can be used for the Ideation phase of the lifecycle, to help with identifying technologies, technical know-how and specific tools that may be used for ideation and deliberation, as well as for the Evolution phase of the lifecycle, to help with identifying technologies, technical know-how and specific tools that may be used for evolution and assimilation.

Last but not least, the IPTTM model can be used throughout the IDEA lifecycle, with different roles in each phase, as follows:

- during the Ideation phase, IPTTM can be used as a gap analysis instrument, to help identify existing efforts that can serve as sources of know-how, gaps that call for innovation work, as well as priorities between different possible projects;
- during the Deliberation phase, IPTTM can be used as a design choice tool, as already discussed in the previous sections;
- during the Evolution phase, IPTTM can be used as an instrument for helping to assess whether the implementation decisions are actually converging with or diverging from the initial design choices, and where/why; whereas
- during the Assimilation phase, IPTTM can again be used as an assessment instrument, this time for helping to understand how the actual outcomes of innovation work enrich or otherwise improve the total innovation portfolio of the public sectors involved.

This overall approach of combining the IDEA lifecycle for public sector innovation with the IPTTM model and the rest of the methodological instruments proposed in this study is depicted, in a schematic summary, in Figure 1 below.

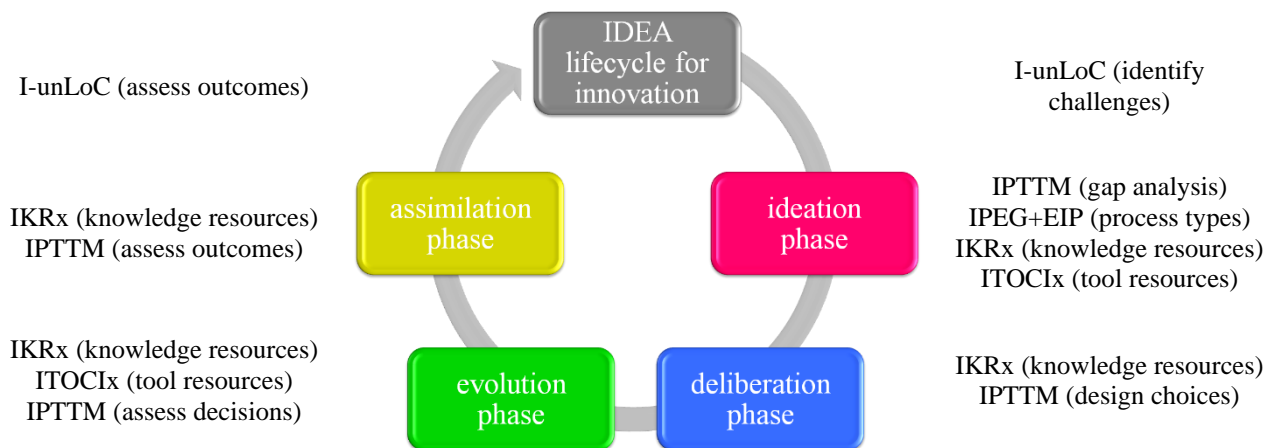


Figure 1. The I⁷ integrated framework of methodological instruments for fostering innovation work in the public sector.

Source: Consultant, original work for the study on Fostering Innovation in the Public Sectors of the Arab Region.

III. TIME MATURITY AND SDG AFFERENCE ANALYSIS FINDINGS OF THE NATIVE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED

A. INTRODUCTORY NOTES (I): TIME MATURITY AND SDG AFFERENCE CHARACTERISTICS

A detailed annex of the study presents the time maturity and SDG afference characteristics, as these concepts and dimensions are defined in the IPTTM model for public sector innovation efforts (cf. the corresponding chapter), identified for the native innovation efforts sampled from UN ESCWA member countries in the context of the study on Fostering Innovation in the Public Sectors of the Arab Region.

These native efforts include:

- a total of 29 public sector innovation efforts sampled from responses of Arab Region public sectors to the questionnaire on innovation effort examples which has been prepared and circulated during the study; and
- a total of 40 additional public sector innovation efforts from Arab Region countries, sampled from the information available on the Knowledge Base of UN Public Service Awards Initiatives (online accessible at webpage <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases>); these have been chosen out of those submitted to this knowledge base within the recent years (2015 onwards) with the help of ESCWA TDD colleagues to whom the consultant working on the study is indebted.

It should be noted at this point that the complete descriptions of the 20 efforts sampled from respondents of Arab Region public sectors in the context of the study are available in one more annex, whereas the complete descriptions of the additional 40 public sector innovation efforts are online available in the Knowledge Base of UN Public Service Awards Initiatives as discussed above.

These sources lead to a total of 69 public sector innovation efforts from Arab Region countries sampled in the context of the study on Fostering Innovation in the Public Sectors of the Arab Region, which constitutes a very important information base for further exploring the realities that these efforts have faced and at the same time influenced.

These 69 native innovation efforts sampled are catalogued in the annex in terms of basic information, time maturity and SDG afference characteristics. The ordering of the efforts catalogued results from sorting primarily on ascending launch year, then on ascending completion year, and then in ascending alphabetical order of effort title.

The afference of sampled innovation efforts to the Sustainable Development Goals adopted by the United Nations General Assembly, due to the particular importance of this dimension, is presented in separate sections at the last part of the chapter. The data provided in these sections do not attempt to give an exhaustive account of all possible afferences of each sampled effort to the entire agenda of Sustainable Development Goals, but rather identify an interesting afference of each effort to one SDG, which can certainly be further explored and enriched with afferences to more goals and subgoals.

The annex in question is concluded with notes elaborating on the meaning and valuation details for the metadata provided for each effort.

B. INTRODUCTORY NOTES (II): TIME MATURITY AND SDG AFFERENCE ANALYSIS

This chapter presents indicative results of the analysis of the native public sector innovation efforts currently sampled from UN ESCWA member countries, totaling a set of 69 efforts as discussed above, along two specific dimensions of the IPTTM model which stand out with particular importance: the time maturity dimension, as

well as the specific process type dimension on afferece to the Sustainable Development Goals adopted by the United Nations General Assembly.

The analysis findings presented below are clearly dependent on the composition of the above sample of public sector innovation efforts currently available, and should be taken as valid for this specific sample rather than as literal general truths. Enriching the innovation efforts sampled with more cases would allow these findings to better approach the realities of innovation efforts undertaken by Arab Region public sectors.

Still, even as they currently stand, these findings are able to show that Arab Region public sectors are already active in innovation efforts, with afferece to a number of Sustainable Development Goals. Moreover, the findings below are already useful for performing a preliminary gap analysis for SDGs that do not seem to be fully covered by current innovation efforts (at least by those efforts currently sampled, to be more exact). These gap findings can be quite helpful for seeking additional examples of innovation efforts both natively (taken to mean, in this context, from Arab Region public sectors) as well as externally (from non-ESCWA member countries), which is an important intended outcome of applying the IPTTM conceptual model and analysis on the efforts sampled.

Moreover, moving on to a similar analysis of the rest of the process type dimensions of the efforts sampled, may allow to identify possible gaps along dimension such as modality, focality and many others, and use these as drivers for seeking additional public sector innovation examples in the same line of thought as above.

C. GEOGRAPHICAL DISTRIBUTION OF THE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED

Table 1 below presents the distribution of the public sector innovation efforts currently sampled across ESCWA member countries. Clearly, there are some countries with more innovation efforts associated than others. Still, it should be kept in mind that this has to do with the specific sample of innovation efforts currently available, which may not be fully representative of all the efforts actually undertaken by ESCWA member country public sectors.

In this line of thought, and departing from eventual cross-country comparisons to look at Arab Region public sectors as a whole, an important finding that can be derived from Table 1 below is that, even at this sampling stage, 12 out of 18 ESCWA member countries have public sector innovation efforts to showcase. This is clearly a positive sign for the public sector innovation performance of the region as a whole.

Table 1. Geographical distribution of the public sector innovation efforts currently sampled.

country	efforts sampled
Bahrain	14
Egypt	3
Jordan	18
Kuwait	3
Lebanon	1
Morocco	6
Oman	10
Palestine	2
Qatar	1
Saudi Arabia	7
Tunisia	1
UAE	3
12 countries	69 efforts

Source: Consultant, original work for the study on Fostering Innovation in the Public Sectors of the Arab Region.

D. TIME DISTRIBUTION OF THE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED

Table 2 below presents the distribution of the public sector innovation efforts currently sampled across the calendar years in which these efforts have been launched or active. Clearly, as years move towards the present, the distribution of innovation efforts becomes more and more important. Still, it should be kept in mind that this finding may be actually inflated by two positive biases inherent in the sampling and analysis process: (a) public sectors can be expected to be more prone to contributing more recent examples of efforts rather than historical ones; and (b) the fact that not all efforts contributed have a clear-cut completion date, leads to extend their assumed timeframe until the present. This latter bias may create the impression that, currently, there exist more innovation efforts active than in reality. Still, this can only be confirmed and, if necessary, rectified, by direct feedback from the public sectors concerned, whose help in making the sample and findings more accurate cannot be overstressed.

Table 2. Calendar year distribution of (a) the launch and (b), (c) the activity of public sector innovation efforts currently sampled.

(a)		(c)	
3-year period	launched efforts sampled	year	active efforts sampled
2000 – 2002	2	2002	2
2003 – 2005	2	2003	2
2006 – 2008	9	2004	3
2009 – 2011	16	2005	4
2012 – 2014	24	2006	10
2015 – 2017	16	2007	11
18 years	69 efforts	2008	13
		2009	15
		2010	19
		2011	29
		2012	37
		2013	45
		2014	53
		2015	61
		2016	64
		2017	63
		18 years	69 efforts

(b)	
3-year period	active efforts sampled
2000 – 2002	2
2003 – 2005	4
2006 – 2008	13
2009 – 2011	29
2012 – 2014	53
2015 – 2017	68
18 years	69 efforts

Source: Consultant, original work for the study on Fostering Innovation in the Public Sectors of the Arab Region.

E. TIME MATURITY FINDINGS FOR THE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED

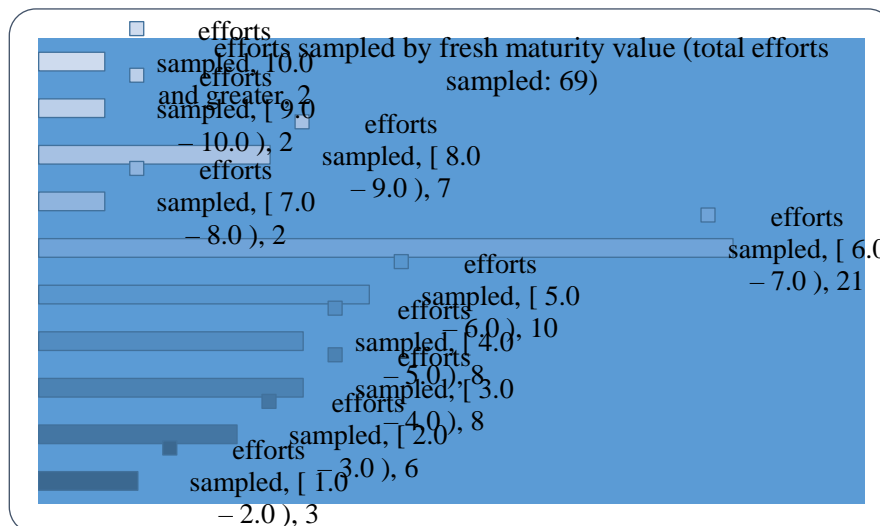
Analysis of the public sector innovation efforts sampled along their time maturity, and more specifically along their fresh maturity dimension as the latter is defined in the IPTTM conceptual model, yields some interesting findings which are presented in Table 3 and Figure 1 below.

Table 3. Distribution of the public sector innovation efforts sampled across fresh maturity value intervals.

fresh maturity value intervals	efforts sampled
[1.0 – 2.0)	3
[2.0 – 3.0)	6
[3.0 – 4.0)	8
[4.0 – 5.0)	8
[5.0 – 6.0)	10
[6.0 – 7.0)	21
[7.0 – 8.0)	2

[8.0 – 9.0)	7
[9.0 – 10.0)	2
10.0 and greater	2
all values	69 efforts

Source: Consultant, original work for the study on Fostering Innovation in the Public Sectors of the Arab Region.



Source: Consultant, original work for the study on Fostering Innovation in the Public Sectors of the Arab Region.

Figure 1. Chart for the distribution of the public sector innovation efforts sampled across fresh maturity value intervals.

As can be seen from these data, a typical interval for the fresh maturity values of the public sector innovation efforts currently sampled is located between values 5.0 and 7.0. This, according to the formula used for calculating this metric, points to efforts active for roughly 5 calendar years, some of which are overlapping with the recent past 5-years timeframe. This means that these efforts are adequately fresh to provide valid insights, and at the same time adequately mature to provide useful experience, which is clearly a desirable outcome of sampling them.

F. EXAMPLES OF PUBLIC SECTOR INNOVATION EFFORTS OF DIFFERENT FRESH MATURITY

Following from the above analysis and findings, some indicative examples of public sector innovation efforts sampled with fresh maturity values falling (a) within, (b) above or (c) below the typical [5.0, 7.0) interval are provided in the Table 4 below.

Table 4. Examples of public sector innovation efforts with different fresh maturity values (in ascending order).

example	country	fresh maturity	launch year
Universal Service Fund ³⁰	Saudi Arabia	1,0	2017
Government eService Platform ³¹	Qatar	2,0	2016
Tasdeed ³²	Kuwait	3,0	2015

³⁰ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/5409>.

³¹ More information available from UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts, cf. the relevant annex.

³² More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3347>.

Governmental Mobile Applications Competition ³³	Palestine	3,0	2015
Establish Egypt National Grid Reference ³⁴	Egypt	4,0	2014
eClearance System ³⁵	Oman	5,0	2013
Unstructured Supplementary Service Data (USSD) Application ³⁶	Tunisia	6,0	2011
Emirates ID Business Process Re-Engineering Initiative ³⁷	UAE	7,0	2009
GIFT-MENA ³⁸	Lebanon	8,5	2006
Center of Excellence for Technical and Vocational Education ³⁹	Bahrain	9,0	2005
Queen Rania Center for Entrepreneurship ⁴⁰	Jordan	9,5	2004
RAMED Medical Assistance Plan ⁴¹	Morocco	10,5	2002

Source: Consultant, original work for the study on Fostering Innovation in the Public Sectors of the Arab Region.

It should be noted that the selection of examples presented in the above table is indicative in a twofold sense, since an attempt has been made to cover all fresh maturity value intervals (10 cases) with at least one example each, and at the same time all Arab Region countries sampled (12 countries) with at least one example each as well. In this respect, the selection made should not be taken as representative of the overall fresh maturity of public sector innovation efforts of any of the countries involved, since there are no indications to back up any such conclusion.

At the same time, the data presented in the above table may give the impression that fresh maturity is actually a synonym for the launch year of a public sector innovation effort, as it can be observed that the launch years of the efforts given as examples are actually descending in the opposite order of their ascending fresh maturity. Indeed, as also discussed in the definition of the fresh maturity metric of the IPTTM model, this metric is dependent on the launch year of an effort as well as on its completion year and the time that has elapsed since completion. Still, given that for most of the efforts sampled there is no explicit indication of completion⁴², so that completion years are technically set to the present time and time elapsed after completion is set to zero, the effect of those factors on the metric becomes neutralized with the lateral result that metric values seem dependent on launch year only. This is not the general case, as already explained in the model description, but only a special case that appears when only ongoing efforts are considered.

With those notes in mind, it should nevertheless be pointed out that the study of public sector innovation efforts along their fresh maturity, and their ordering in values above or below of a typical case, allows to bring forward a picture of efforts that fall in three different classes:

- efforts more fresh than mature, as the first 5 examples of Table 4 above (Universal Service Fund, Government eService Platform, Tasdeed, Governmental Mobile Applications Competition, Establish

³³ More information available from UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts, cf. the relevant annex.

³⁴ More information available from UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts, cf. the relevant annex.

³⁵ More information available from UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts, cf. the relevant annex.

³⁶ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3745>.

³⁷ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3660>.

³⁸ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3607>.

³⁹ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3422>.

⁴⁰ More information available from UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts, cf. the relevant annex.

⁴¹ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3890>.

⁴² This should not be necessarily interpreted as missing or low-quality information. It may be due to such problems or, on the other hand, it may be due to the fact that the efforts under study have accomplished results that continue to operate until the present, which is certainly a positive outcome.

Egypt National Grid Reference), which could serve as a source of new ideas and opportunities for innovating;

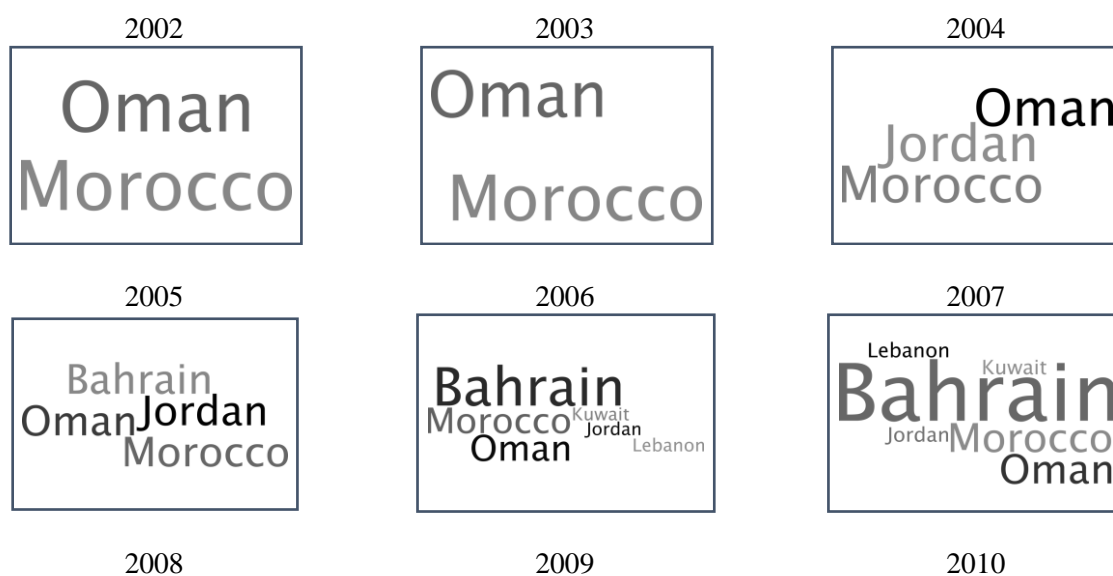
- efforts more mature than fresh, as the last 4 examples of Table 4 above (GIFT-MENA, Center of Excellence for Technical and Vocational Education, Queen Rania Center for Entrepreneurship, RAMED Medical Assistance Plan), which could serve as a source of experience and know-how in innovation efforts and they problems that they have to overcome during their evolution; and
- efforts fairly mature and fairly fresh at the same time, as the middle 3 examples of Table 4 above (eClearance System, Unstructured Supplementary Service Data (USSD) Application, Emirates ID Business Process Re-Engineering Initiative), which could serve as a source of dynamism and practical thinking for moving on with innovation work.

Looked at in this way, all innovation efforts sampled, from those more fresh than mature to those more mature than fresh, have something important to offer in terms of lessons and ideas that can be shared, and the same is certainly true for the public sectors and the countries that have undertaken them. Then, a practical implication of such a conclusion is that any event, forum or other capacity-building or policy-making instrument aspiring to share innovation experience and create the thrust for more innovation work, should best involve neither only fresh nor only mature efforts, but preferably efforts that cover all cases of relative freshness and maturity. This, it should be noted, is exactly the rationale behind the definition of this composite fresh maturity metric in the IPTTM model context.

G. LATITUDINAL VISUALIZATION OF THE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED

In research design methodologies and literature, the notion of a latitudinal or synchronic approach (the latter term originating from linguistics)⁴³ is used to denote a way of analysis/study that considers a phenomenon at a fixed point in time, taking geography or some other category as a variable of interest. In the context of the present study, this approach can be used for each one of the calendar years in which some of the public sector innovation efforts sampled from Arab Region countries have been active, to provide a geography breakdown of the efforts active in each given calendar year.

The visualization of the sampled public sector innovation efforts in a latitudinal approach as above, showing the countries active in such efforts for each specific calendar year, along a series of successive calendar years, yields the results depicted in Figure 2.



⁴³ Simple working definitions of these terms may be found online on sources such as http://www.answers.com/Q/What_is_a_Latitudinal_Research_or_Study, <https://www.scribd.com/doc/86911597/Longitudinal-vs-Latitudinal> and https://en.wikipedia.org/wiki/Synchrony_and_diachrony.



Source: Consultant, original work for the study on Fostering Innovation in the Public Sectors of the Arab Region. Word clouds have been produced using the Wordle free service, online available at <http://www.wordle.net/>.

Figure 2. Latitudinal visualization of the innovation efforts sampled across Arab Region countries along successive calendar years (bigger font size represents more occurrences).

As can be observed from this visualization, to the extent that the current sample of efforts may be considered adequately representative of reality, there are countries that have been more active than others in innovation efforts over time, then leaving their place to newcomers, making this a lively process with many participant countries, rather than an elite effort for only a few. In this line of thought, maybe the single most important interpretation of this finding could be that public sector innovation is a domain in which all countries have the potential to participate and exchange.

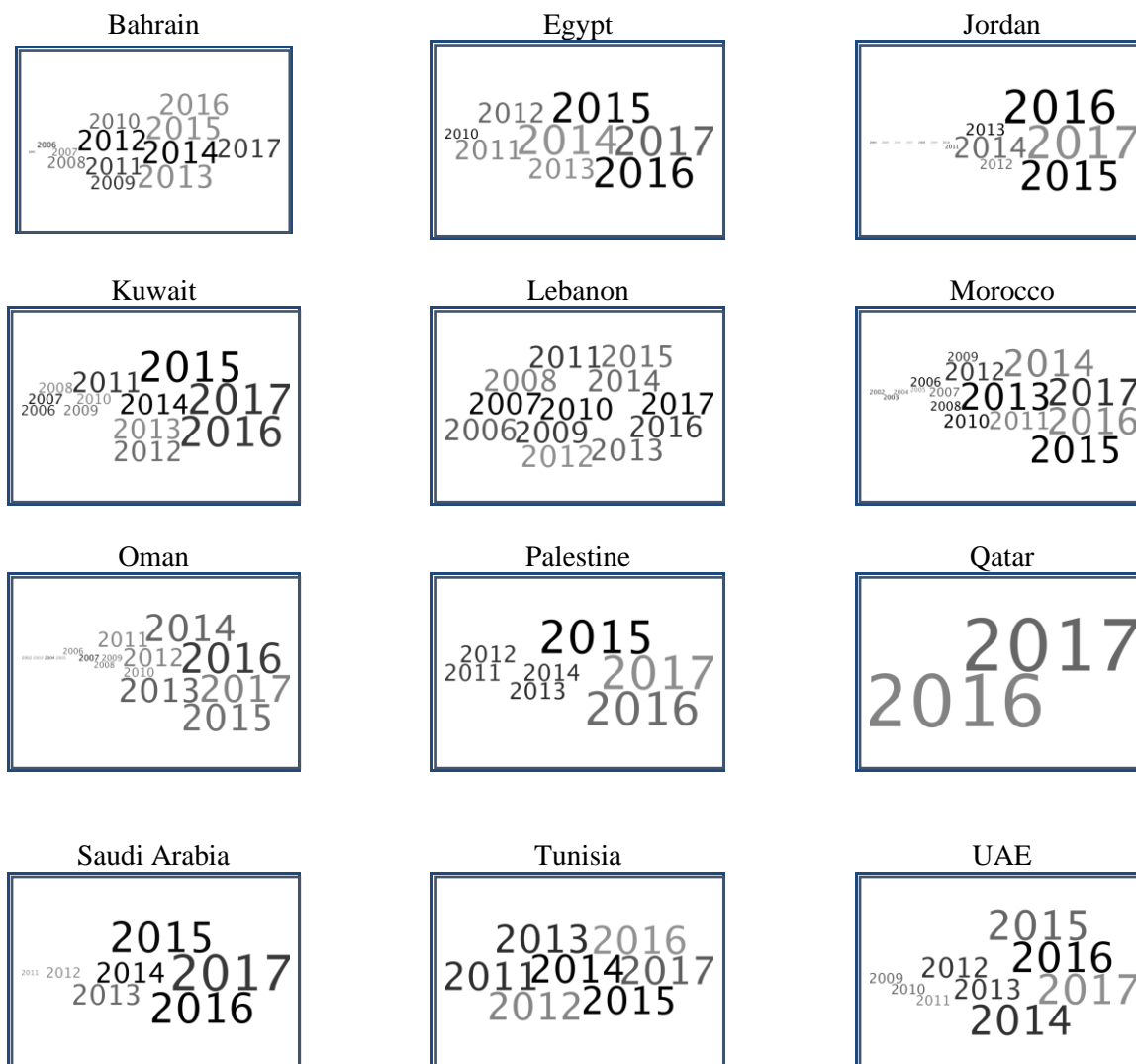
H. LONGITUDINAL VISUALIZATION OF THE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED

In research design methodologies and literature, the notion of a longitudinal or diachronic approach (the latter term originating from linguistics)⁴⁴ is used to denote a way of analysis/study that considers the same phenomenon or variable over sufficiently long periods of time, that may span up to many decades, in order to have enough information for shedding light on its evolutionary patterns or cause and effect relationships with

⁴⁴ Simple working definitions of these terms may be found online on sources such as https://en.wikipedia.org/wiki/Longitudinal_study, <https://www.scribd.com/doc/86911597/Longitudinal-vs-Latitudinal> and https://en.wikipedia.org/wiki/Synchrony_and_diachrony.

third factors. In the context of the present study, this approach can be used for each one of the Arab Region countries in which some of the public sector innovation efforts sampled have been active, to provide a calendar year breakdown of the efforts active in each given country.

The visualization of the sampled public sector innovation efforts in a longitudinal approach as above, showing the calendar years with active such efforts for each specific country, along all countries concerned, yields the results depicted in Figure 3.



Source: Consultant, original work for the study on Fostering Innovation in the Public Sectors of the Arab Region. Word clouds have been produced using the Wordle free service, online available at <http://www.wordle.net/>.

Figure 3. Longitudinal visualization of the innovation efforts sampled across successive calendar years along Arab Region countries involved (bigger font size represents more occurrences).

As can be observed from this visualization, to the extent that the current sample of efforts may be considered adequately representative of reality, there are countries which have a history with innovation efforts longer than others (as visually expressed by the past years long tail at the left part of each year cloud). This may indeed show that, among Arab Region public sectors, there are some public sectors more experienced in innovation, who would be particularly welcome to share their lessons learnt.

I. DISTRIBUTION OF THE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED ACROSS AFFERENCE TO SDGs

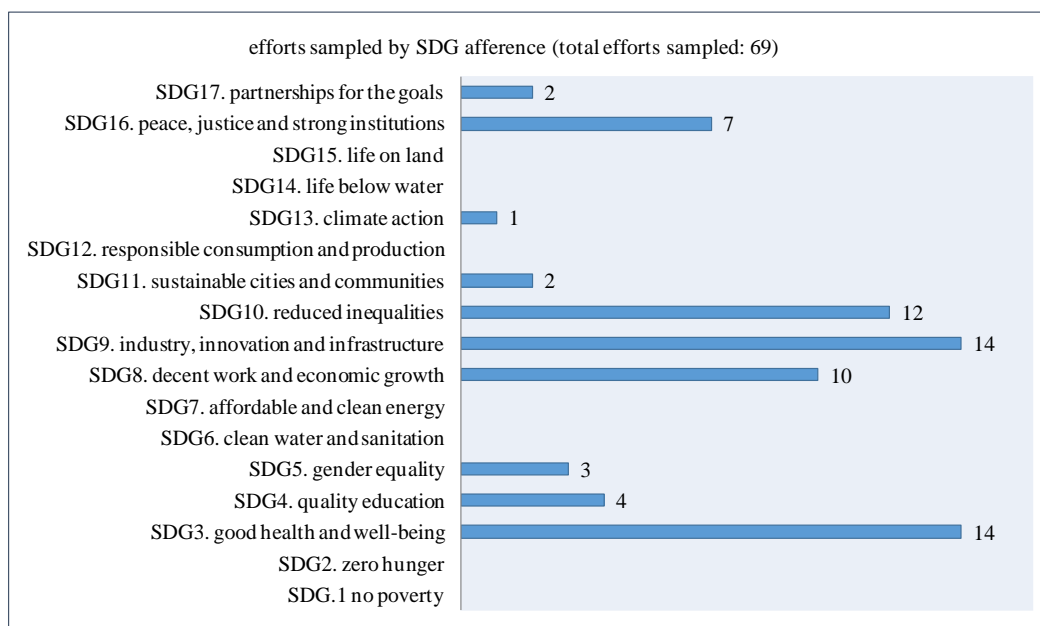
Table 5 and Figure 4 below present the distribution of the public sector innovation efforts currently sampled across reference to UN Sustainable Development Goals. Clearly, there are some SDGs with more innovation efforts associated than others. Still, it should be kept in mind that this has to do with the specific sample of innovation efforts currently available, which may not be fully representative of all the efforts actually undertaken by ESCWA member country public sectors.

In this line of thought, and departing from eventual cross-SDG comparisons to look at the UN SDG agenda as a whole, an important finding that can be derived from Table 5 below is that, even at this sampling stage, 10 out of 17 UN SDGs seem to have public sector innovation efforts to showcase. This is clearly a positive sign for the performance of the public sector innovation sample as a whole.

Table 5. Distribution of the public sector innovation efforts currently sampled across reference to UN SDGs.

SDG reference	efforts sampled
SDG1. no poverty	
SDG2. zero hunger	
SDG3. good health and well-being	14
SDG4. quality education	4
SDG5. gender equality	3
SDG6. clean water and sanitation	
SDG7. affordable and clean energy	
SDG8. decent work and economic growth	10
SDG9. industry, innovation and infrastructure	14
SDG10. reduced inequalities	12
SDG11. sustainable cities and communities	2
SDG12. responsible consumption and production	
SDG13. climate action	1
SDG14. life below water	
SDG15. life on land	
SDG16. peace, justice and strong institutions	7
SDG17. partnerships for the goals	2
17 SDGs	69 efforts

Source: Consultant, original work for the study on Fostering Innovation in the Public Sectors of the Arab Region.



Source: Consultant, original work for the study on Fostering Innovation in the Public Sectors of the Arab Region.

Figure 4. Chart for the distribution of the public sector innovation efforts currently sampled across afference to UN SDGs.

At the same time, the above table and figure can serve as findings of a gap analysis, in order to identify SDGs which seem to be currently under-afferenced by public sector innovation efforts, explore the eventual reasons for that, and seek to bring in examples of efforts afferent to these SDGs as well.

J. EXAMPLES OF PUBLIC SECTOR INNOVATION EFFORTS OF DIFFERENT SDG AFFERENCE

As already mentioned in the introductory notes, the SDG afference characteristics of all public sector innovation efforts sampled are presented in a detailed annex of the study. Still, following from the above analysis and findings, some indicative examples of public sector innovation efforts sampled with different SDG afference values are provided in Table 6 below.

Table 6. Examples of sampled public sector innovation efforts with different SDG afference values (in ascending order).

example	country	SDG afference
School Oral Health Program ⁴⁵	Kuwait	SDG3. good health and well-being
Center of Excellence for Technical and Vocational Education ⁴⁶	Bahrain	SDG4. quality education
Egyptian Women's Citizenship Initiative ⁴⁷	Egypt	SDG5. gender equality
Transparency of the Access System in the Moroccan Public Service / TranSA-FP ⁴⁸	Morocco	SDG8. decent work and economic growth

⁴⁵ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/2747>.

⁴⁶ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3422>.

⁴⁷ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/2958>.

⁴⁸ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/5231>.

Governmental Mobile Applications Competition ⁴⁹	Palestine	SDG9. industry, innovation and infrastructure
Government eService Platform ⁵⁰	Qatar	SDG9. industry, innovation and infrastructure
KSA Housing Program ⁵¹	Saudi Arabia	SDG10. reduced inequalities
Abu Dhabi Social Housing Policies and Programs ⁵²	UAE	SDG10. reduced inequalities
Baladiyeti Mobile Application ⁵³	Oman	SDG11. sustainable cities and communities
Green Building Practices: Implementing Photovoltaic Cells Pilot Project and Photocells ⁵⁴	Jordan	SDG13. climate action
Unstructured Supplementary Service Data (USSD) Application ⁵⁵	Tunisia	SDG16. peace, justice and strong institutions
GIFT-MENA ⁵⁶	Lebanon	SDG17. partnerships for the goals

Source: Consultant, original work for the study on Fostering Innovation in the Public Sectors of the Arab Region.

As for the fresh maturity examples of Table 4, it should be noted that the selection of examples presented in Table 6 above is indicative in a twofold sense, since an attempt has been made to cover all SDG afference cases (10 cases found in the sample) with at least one example each, all Arab Region countries sampled (12 countries) with at least one example each as well and, at the same time, do not include examples already included in Table 4 (with the exception of some examples which are the only ones sampled for the corresponding countries). In this respect, the selection made should not be taken as representative of the overall SDG afference of public sector innovation efforts of any of the countries involved, since there are no indications to back up any such conclusion.

Given that, as already discussed, these examples do not refer to some of the SDGs (SDG1. no poverty, SDG2. zero hunger, SDG6. clean water and sanitation, SDG7. affordable and clean energy, SDG12. responsible consumption and production, SDG14. life below water, SDG15. life on land), an attempt has been made to identify a number of additional examples, with afference to these SDGs as well. In this respect, Table 7 below presents a selection of such examples. All these have been sourced from the Knowledge Base of UN Public Service Awards Initiatives, come from third countries beyond the Arab Region and detailed information for each example is online available in the corresponding entry of this Knowledge Base, as elaborated in the footnotes.

Table 7. Examples of public sector innovation efforts from third countries with afference to SDGs 1, 2, 6, 7, 12, 14 and 15 (in ascending order of SDG numbering).

example	country	SDG afference
Model of Social Innovation for Food Sovereignty and Local Economic Development in Azuay Province ⁵⁷	Ecuador	SDG1. no poverty

⁴⁹ More information available from UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts, cf. the relevant annex.

⁵⁰ More information available from UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts, cf. the relevant annex.

⁵¹ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3644>.

⁵² More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/5214>.

⁵³ More information available from UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts, cf. the relevant annex.

⁵⁴ More information available from UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts, cf. the relevant annex.

⁵⁵ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3745>.

⁵⁶ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3607>.

⁵⁷ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/5130>.

Aadhaar enabled Public Distribution System ⁵⁸	India	SDG2. zero hunger
Water, Life and Knowledge ⁵⁹	Colombia	SDG6. clean water and sanitation
Public-Private Joint Energy Welfare Project ⁶⁰	Rep. of Korea	SDG7. affordable and clean energy
PTT Reforestation ⁶¹	Thailand	SDG12. responsible consumption and production
Under Water Restocking (UWR) ⁶²	Indonesia	SDG14. life below water
The Neem Project ⁶³	India	SDG15. life on land

Source: Consultant, original work for the study on Fostering Innovation in the Public Sectors of the Arab Region.

The selection of examples in Table 7 above should be considered as indicative, and certainly not exhaustive, since an attempt has been made to identify as much as possible recent examples (all examples selected date from 2017) from as many as possible different countries (with an exception in case of India, from where 2 examples originate).

Still, even under this indicative way of work, these examples showcase the idea that public sector innovation is possible in many different domains and with a view to many different SDGs. In this respect, these examples can indeed serve to interested public sectors as sources of ideas and experience for innovating towards the corresponding sustainable development goals.

Lastly, the variety of SDG afference cases which the examples of Table 6 and Table 7 above demonstrate is also an indication that, for any given sample of public sector innovation efforts, an SDG afference analysis exercise is meaningful. Indeed, any strengths that may be identified by such an exercise provide the grounds for sharing innovation know-how with other public sectors, whereas any gaps in the contribution of analyzed efforts to SDGs may be targeted for further innovation focus, as the examples above show.

⁵⁸ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/5174>.

⁵⁹ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/5387> (in Spanish).

⁶⁰ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/5115>.

⁶¹ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/5086>.

⁶² More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/5016>.

⁶³ More information available from Knowledge Base of UN Public Service Awards Initiatives, case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3918>.

IV. CONCLUDING POINTS: PRELIMINARY ASSESSMENT, CONSIDERATIONS AND RECOMMENDATIONS FOR THE IPTTM MODEL

This chapter presents some concluding points concerning a preliminary assessment of the IPTTM model, as well as some considerations that public sectors wishing to apply this model should keep in mind. The chapter is concluded with some recommendations for further work, with a view to helping this model evolve and mature.

K. PRELIMINARY ASSESSMENT POINTS FOR THE IPTTM MODEL

The IPTTM model can be considered to have two strengths:

(a) A strength in terms of inclusiveness, due to the fact that it has been developed in a grounded theory approach from abstracting the characteristics of existing innovation efforts from public sectors of the Arab Region during recent years; this very inclusiveness, in fact, is the result of and the reason for the great number of dimensions that this model encompasses, in order to accommodate as many as possible characteristics of interest and importance for the design of public sector innovation efforts and their outcomes.

(b) A strength in terms of usefulness given that, as already discussed and showcased through examples in the previous chapters, this model can serve

- as a gap analysis instrument, for existing innovation efforts,
- as a design choice tool, for new innovation efforts,
- as an outcomes assessment reference, to assess whether evolving innovation efforts are actually enriching and improving the overall innovation portfolio of involved public sector, as well as
- through repeated use of this model, as a vehicle to foster the design of more and more well thought and well implemented innovation efforts, i.e. as a means to help innovation efforts gain more maturity in terms of methods and achievements.

This usefulness, it can be noted, is also testified by the ways in which the IPTTM model can be integrated within all phases of the IDEA lifecycle for public sector innovation, together with all other components of the proposed I7 integrated framework.

At the same time, the novelty of the IPTTM model, which is the result of original work by the consultant within the study on Fostering Innovation in the Public Sectors of the Arab Region, may be considered as a source of potential weaknesses. Clearly, any model attempting to foster maturity in some domain of work, let alone in a domain as composite as public sector innovation, needs to become mature in itself. In this respect, possible shortcomings of the model may include the need to adjust some of its dimensions, make additions or even simplify some parts of its structure. In all cases, it is to be noted that the IPTTM model is open to further work for improvements, and the recommendations provided in the following comprise some practical proposals in this direction.

L. CONSIDERATIONS FOR USING THE IPTTM MODEL

As has already been discussed in the previous chapters, the IPTTM model, like all methodological instruments, needs to be used with caution, and the following considerations are important to bear in mind for the public sectors that wish to apply it, as they have to do with limitations and the overall rationale behind this model:

(a) The model is not intended to operate as a silver bullet that will solve all problems inherent in the design and realization of public sector innovation efforts, neither provide any sort of ultimate one-fits-all answers. It

is clearly conceived and structured as an aid which, whether used for gap analysis, design choices, outcomes assessment or fostering maturity overall, can only point to some possible answers, but in no case identify them as absolute truths. Therefore, this model should be used like all other tools that can help the diagnostic and decision-making processes with public sectors, and its findings will need to be further explored, and their implications assessed, by innovation workers.

(b) The completeness and quality of the findings that use of the IPTTM model may provide, especially when used as a gap analysis instrument, is clearly relying on the completeness and quality of the data on which it operates. Missing or fuzzy information about the characteristics of existing innovation efforts will inevitably lead to missing or fuzzy findings about eventual gaps. A similar point may be made for using this model as a design choice tool, in which case additional work may be needed on behalf of innovation workers in order to make sure that the various choices proposed by the model are correctly / consistently understood across the innovation team and all stakeholders involved.

(c) The support that this model offers to longitudinal and latitudinal analysis of existing innovation efforts across countries and calendar years is not intended to be used as a ranking or competition exercise. Indeed, as well known to public sector innovation workers already, collaboration is much more fruitful than competition, especially in complex issues such as innovation and in complicated settings such as those of public sectors, that do not lend themselves, at least on the long run, to efforts of individual heroism. Innovation needs to be managed as something over which to work together, and rankings and rewards can best serve to compare our own competencies and achievements at present with those that we had in the past, rather than with those of others.

M. RECOMMENDATIONS FOR FOLLOWING UP WITH WORK ON THE IPTTM MODEL

In order to have the IPTTM model evolve and improve it is of tantamount importance, just like for all methodological instruments aspiring to help with public sector innovation, to involve in this effort those primarily concerned, namely public sector innovation workers.

In this line of thought, two practical recommendations that can be made for follow up with work on making the IPTTM better fit for purpose are as follows:

(1) Introduce this model in interactive training sessions with public sector innovation workers. Such sessions could be organized at intra-organizational, inter-organizational or broader level, keeping them in all cases at a controlled scale, they could accommodate different scenarios for the various uses of the model, and they could also include an assessment part in which the stakeholders involved as trainees would be able to provide their evaluations and feedback not only for the training sessions, but for the model itself.

(2) Introduce this model in consultations with public sector innovation workers. These consultations could be organized at different levels as above, and they could accommodate requests for feedback on

- any aspect of the model which may seem to suffer from technical flaws;
- any part of the model which may seem to be redundant;
- any perceived strengths that this model may have;
- any opportunities that use of this model may be considered to bring forward;
- any problems that use of this model may be feared to create;
- assessments of the eventual costs and potential benefits of applying this model in practice.

These two streams of work, for putting the IPTTM model to training and consultation, could be run in parallel or not, with participation of the same stakeholders or not. In all cases, an adequate amount of accumulated work along these two streams, no matter how this would be organized in interim steps, can be expected to ultimately provide trustworthy findings and eventual improvements on the model.

Such an approach, as can be noted in concluding this discussion, may be considered not only for the IPTTM model but for any other component of the I⁷ integrated framework for public sector innovation proposed in this study, as well as for this framework as a whole.

**V. ANNEX 1:
COMPLETE DESCRIPTIONS OF THE EXAMPLES OF PUBLIC SECTOR
INNOVATION EFFORTS CONTRIBUTED BY UN ESCWA MEMBER
COUNTRIES**

INTRODUCTORY NOTES

This annex provides the complete descriptions of the examples of Public Sector Innovation efforts that have been contributed by the public sectors of UN ESCWA member countries in the context of the study on *Fostering Innovation in the Public Sectors of the Arab Region*, in response to a corresponding questionnaire that has been prepared and circulated in the course of the study for that purpose.

The complete descriptions of all 29 examples of public sector innovation efforts that have been contributed are provided in the following. These descriptions are included as they have been provided by respondents, with only minor editing changes for uniformity of description and language. The personal data of individual respondents have been anonymized, whereas the country and public sector agency from which each example originates are visible in the example full title. UN ESCWA member countries are referenced using the UN-designated formal name of each country.⁶⁴

Last but not least, the examples below are ordered in ascending launch date, then in ascending completion date, and then in ascending alphabetical order of the full effort title. To this end, year-only launch or completion dates are sorted before year/month ones, and ongoing completion date values are sorted after specific date values.

The author of the *Fostering Innovation in the Public Sectors of the Arab Region* study and UN ESCWA are indebted to the public sectors and individual respondents of ESCWA member countries for contributing these valuable examples of actual public sector innovation efforts in the Arab region, that provide essentially helpful insights into the realities and state of practice of these efforts.

**1.1. HASHEMITE KINGDOM OF JORDAN HIGHER COUNCIL FOR SCIENCE & TECHNOLOGY
CONTRIBUTED EXAMPLE: QUEEN RANIA CENTER FOR ENTREPRENEURSHIP**

Respondent: Top level

Initiative	Queen Rania Center for Entrepreneurship
Actor	Princess Sumaya University for Technology
Place	The Center holds its activities in Jordan, mainly in Amman
Timeline	Currently, the initiative is in the implementation phase for an undetermined period
Motivation	To help develop Technology Entrepreneurship in Jordan
Aims	To improve ways of work, i.e. to make some things even better To meet new needs, that did not exist before
Achievements	The Center has organized many activities that benefited thousands of entrepreneurs, professionals and students in Jordan: +30,000 people participated in general & special networking activities;

⁶⁴ Information sourced from webpage <https://www.unescwa.org/about-escwa/overview/member-states>.

	<p>+4,000 people participated in boot camps, training workshops & mentoring programs;</p> <p>+300 jobs created;</p> <p>+100 start-ups & projects supported & recognized;</p> <p>+25 high growth technology start-ups founded; and</p> <p>+10 national conferences and competitions organized</p>
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1.2. SULTANATE OF OMAN RESEARCH COUNCIL CONTRIBUTED EXAMPLE: INNOVATION PARK MUSCAT

Respondent: Middle level

Initiative	Innovation Park Muscat
Actor	The project was initiated and funded by The Research Council of Oman
Place	<p>Innovation Park Muscat is located in Muscat, the capital of Oman. Its precise location is in Al Khoud, Muscat – neighbouring The Sultan Qaboos University, Knowledge Oasis Muscat, Russayl Industrial Estate, Botanic Gardens as well as being close to Muscat International Airport.</p> <p>This strategic location considered as an innovation cluster of active field organisations and expecting some more innovation projects to start within the mentioned area. The land totals up to an area of 540,000 m².</p>
Timeline	<p>Planning: 2006-2008</p> <p>Decision: 2008-2010</p> <p>Drafting and tendering process: 2011-2012</p> <p>Implementation: 2013-2018</p>
Motivation	The need for the project came from the initiative of Research Council to develop the National Research Strategy, which resulted in a number of recommendations including the necessity to have a science and technology park in Oman to be a regional hub for innovation. The vision of this Sciences Park is to be a real application of developing research results into commercial products and solutions to the different needs of the country and its citizens, serving as a bridge between the industries, private sector, government and higher education. IPM intends to focus on four sectors (Energy, Food & Biotechnology, Water & Environment and Health) that hold significance for Oman as a nation and as a future leader in global innovation
Aims	<p>To improve ways of work, i.e. to make some things even better</p> <p>To meet new needs, that did not exist before</p> <p>To comply with some broader policies or strategies</p>
Achievements	In 2014, IPM was awarded with the Sustainable Project of the Year Award at Climate Control Awards Middle East, with its “Distinct Cooling System” project. IPM has also managed to sign agreements with two important partners in Energy sector; those are Schlumberger and Takatuf Oman (InstOG) to establish a first of its type education and learning center in Oil and Gas and EOR L.L.C to establish its R&D center. The park management started the pilot phase of incubation program.

**1.3. KINGDOM OF BAHRAIN INFORMATION & E-GOVERNMENT AUTHORITY CONTRIBUTED EXAMPLE:
SILAH GULF (NATIONAL CONTACT CENTER)**

Respondent: Top level

Initiative	Silah Gulf (National Contact Center).
Actor	Information & e-Government Authority together with a private sector contact center provider.
Place	Kingdom of Bahrain and expanded to the Gulf Cooperation Council (GCC) countries
Timeline	Planning: 2008 Decision: 2009 Implementation: 2009 – Ongoing (as per 2017)
Motivation	The effort was to consolidate government contact centers into a single center providing a unique toll free number to access all government services. This meant that citizens, residents and businesses in the country had to remember only a single telephone number to access any government service.
Aims	To solve problems, i.e. to rectify things that were wrong Government efficiencies and cost savings
Achievements	The initiative introduced great efficiency improvements in provisioning government services from the various government bodies. It also meant that call agents were better utilized to serve multiple agencies thereby introducing great savings for the government in service delivery. It also meant consolidated reporting on operational and performance KPIs thereby achieving a high standard of service across agencies and in a unified manner with consolidated reporting for decision makers.

**1.4. KINGDOM OF BAHRAIN INFORMATION & E-GOVERNMENT AUTHORITY CONTRIBUTED EXAMPLE:
SIJILAT (BUSINESS LICENSING SYSTEM)**

Respondent: Top level

Initiative	Sijilat (Business Licensing System).
Actor	Information & e-Government Authority, Ministry of Industry & Commerce, Economic Development Board.
Place	Kingdom of Bahrain.
Timeline	Planning: 06/2009 – 09/2009 Decision: 09/2009 – 06/2010 Tendering: 07/2010 – 06/2011 Implementation: 07/2011 – 05/2015
Motivation	To provide an online based business registration service for new businesses and start-ups. It also includes all administration of existing commercial registrations in the country which entails processes across the various Ministries (Licensors) in order to obtain a commercial license. The

	entire process is conducted online together with fee collection which means that the investor does not need any physical presence. A commercial registration can be obtained in a record 93 seconds.
Aims	To improve ways of work, i.e. to make some things even better To meet new needs, that did not exist before
Achievements	This effort improved the process of commercial registration in the country thereby making it easier for investors to start up their business in Bahrain. It also ensured clarity on the process and reduced the time required to complete the formalities. In addition, the online system enabled new business models such as Virtual Commercial Registration, Business Incubators, Food Trucks, etc.

**1.5. ARAB REPUBLIC OF EGYPT MINISTRY OF COMMUNICATIONS AND INFORMATION TECHNOLOGY
CONTRIBUTED EXAMPLE: TECHNOLOGY INNOVATION AND ENTREPRENEURSHIP CENTER (TIEC)**

Respondent: Top level

Initiative	Technology Innovation and Entrepreneurship Center (TIEC).
Actor	The Egyptian Ministry of Communication and Information Technology established the Technology Innovation and Entrepreneurship Center as an affiliate organization.
Place	TIEC is located in Egypt's Smart Village, and provides its services to the whole country.
Timeline	Planning: 04/2010 – 06/2010 Decision: 08/2010 Implementation: 09/2010 – Ongoing
Motivation	<p>Innovation and ICT Industry Development was one of the three main tracks identified in Egypt's ICT Strategy for 2007-2010, altogether with 'ICT Sector Restructuring' and 'ICT for Development'.</p> <p>The rationale behind the identification of that priority remains as valid in 2010 as it was in 2007, i.e. that (1) technology is one of the main engines of competitiveness, and (2) since new technologies benefit all activities, rapid access to such technologies in the form of new products and knowledge is vital to Egypt's development.</p> <p>Under the 2007-2010 strategy, many efforts and initiatives have been launched in Egypt to pursue the objective of stimulating the emergence of an innovation-enabled ICT sector. Some results are starting to become visible, however, the world – and Egypt's competitors and partners – have moved and transformed.</p> <p>As a result of implementing the strategies of the Ministry of Communications and Information Technology (MCIT) over the past decade, the revenues from information and communication technologies (ICT) exports reached USD1.1 billion by the end of 2010. Egypt is now recognized by international organizations as a global hub in off-shoring and outsourcing. Innovation combined with increased expertise is the only way to consolidate and sustain Egypt's continued success in outsourcing.</p> <p>Egypt has decided to move to the next level to enhance the global competitiveness position of the country in the ICT sector, becoming the primary regional hub for innovation by 2020. The decision has been taken to establish the Technology Innovation and Entrepreneurship (TIEC) to drive innovation and entrepreneurship in ICT for the benefit of national economy.</p> <p>TIEC aims at creating an environment that nurtures talented ICT entrepreneurs with bright ideas, increase export revenues driven by high-value added activities, create advanced jobs, and build Egyptian innovation brand. TIEC achieves its objectives through four areas of work; innovation</p>

	<p>support, incubation, entrepreneurship and business support and technology management. In April 2011, TIEC has launched its implementation strategy to be as a roadmap in achieving its initial objectives.</p> <p>Objectives:</p> <p>Act as a catalyst among: Government -private sector –Academia.</p> <p>Mobilize the different components of the ecosystem.</p> <p>Define, manage, and coordinate the various programs and initiatives derived from the Innovation & Entrepreneurship Strategy jointly with the different stakeholders.</p> <p>Focus on generating revenue from commercialization of Innovations and IP licensing.</p> <p>Solve national existing problems.</p> <p>Brand Egypt as a global competitor in high value-added innovation.</p>
<p>Aims</p>	<p>To improve ways of work, i.e. to make some things even better</p> <p>To meet new needs, that did not exist before</p> <p>To comply with some broader policies or strategies</p>
<p>Achievements</p>	<p>Since its launch in 2010, TIEC has provided several programs for the Egyptian innovators. Some of the already- achieved programs, to name a few, are TIEC Android Mobile Program, EgyptInnovate ICT Award, Capacity Building Program for Industry, IP Support Program, Haiyi Competition, Innovation Management Assessment, etc. Throughout seven years, 8563 individuals were trained, 2138 ideas were generated, 2340 entrepreneurs were supported, 219 start-ups were supported, 450 jobs were created, 57 start-ups were established, over 31 million finance accessed, and broader ecosystem engagement was achieved through 50 entities and 465 individuals.</p> <p>Examples of prominent success stories are many, such as Bey2ollak mobile application. It is a very promising application, developed by Egyptian youths to exchange traffic updates in many routes in two big cities (Cairo and Alexandria). The application has proved great success, with more than five years in the market and over one million users, with zero fund. In 2011, TIEC provided one-year incubation for the project as a part of a prize awarded by TIEC to the youth founders. The incubation helped Bey2ollak team by providing office space, meeting rooms, high speed internet, testing devices, networking opportunities and access to conferences and leading events.</p> <p>Another well-known TIEC’s success story is e-Marketing Egypt; the brainchild of three young Egyptians who had a common goal to create an integrated e-marketing services firm which also acts to provide business marketing research as a means of providing feedback to businesses to be used as a form of digital competitive intelligence. They first began the project at the end of 2008 as a virtual, team of three providing online e-marketing services in Egypt via a website. After joining the incubation program in 2009, they were able to move from a virtual business to one which had a base in Smart Village. They entered the Incubation Business plan Competition in 2009, competing against 180 other contesting groups, and were handed the award of best business plan in the field of technology. Although they had the technical knowhow, they lacked adequate finances, knowledge and expertise necessary to run a start-up. However, TIEC provided them with this much-needed knowledge as well as providing a great incentive to push forward despite the odds, TIEC also gave them the necessary funds to move forward with their business and move it from a virtual company to one with an actual base. The company now has grown more than nationally, and have expanded their work to the Saudi Arabian market. The company is now being used a business model for other start-ups to study their experience and emulate it.</p>

**1.6. HASHEMITE KINGDOM OF JORDAN HIGHER COUNCIL FOR SCIENCE & TECHNOLOGY
CONTRIBUTED EXAMPLE: THE NATIONAL INNOVATION STRATEGY 2013-2017**

Respondent: Top level

Initiative	The National Innovation Strategy 2013-2017.
Actor	The strategy was formulated by the Higher Council for Science and Technology in cooperation with the Ministry of Planning and International Cooperation through six thematic national teams. This effort was also assisted by the World Bank and Korean Development Institute.
Place	The strategy is to be implemented all over the country of Jordan.
Timeline	Planning: 2011 – 09/2012 Decision: 10/2012 – 12/2012 Implementation (Currently phase II): 2013 – 2017
Motivation	Creating sustainable economy.
Aims	To solve problems, i.e. to rectify things that were wrong To improve ways of work, i.e. to make some things even better To meet new needs, that did not exist before To comply with some broader policies or strategies
Achievements	Of this strategy, the establishment of the National Center for Innovation was one of the main outputs.

**1.7. SULTANATE OF OMAN INFORMATION TECHNOLOGY AUTHORITY CONTRIBUTED EXAMPLE:
BALADIYETI MOBILE APPLICATION**

Respondent: Middle to Top Level

Initiative	Baladiyeti Mobile Application
Actor	Muscat Municipality
Place	Throughout Muscat, Sultanate of Oman.
Timeline	Planning: 2011 – 2013 Decision: 08/2013 Implementation: 04/2016 - Ongoing
Motivation	Increase municipal work efficiency Provide better services in an innovative way Save time, efforts, and money for Muscat Municipality (MM) and their beneficiaries. Increase services accessibility to the largest possible segment. More details: Muscat is the heart of state and the platform of governance, finance and business. Muscat Municipality (MM) is the entity which is responsible for Muscat development and infrastructure

	<p>projects, in addition to technical and health aspects, administrative services, city beautification and landscaping.</p> <p>In light of the rapid growth and massive use of Mobiles worldwide, MM decided to benefit from this trend to launch (Baladiyeti) project with a clear vision which is (providing MM services at any time and any place with various techniques in order to reach the largest possible segment of beneficiaries. The application was named (Baladiyeti) (My Municipality) to strengthen the partnership between the customer and MM .In fact (Baladiyeti) contributed directly in supporting e-Oman strategy, as it was implemented as a part of the E-transformation plan which aims to increasing e-services accessibility, integration and quality. It also contributed in the most important stages of the E-transformation plan, beginning with E-presence, E-interaction, e-transaction and integration stage. The application benefited from the national infrastructure, for example, PKI service, e-payment Gateways, Government network MPLS add integration.</p> <p>Through Baladiyeti, MM provided a new electronic channel for its services, which helps users obtain information, interact, and communicate with MM. The user can complete many services electronically without the need to use traditional service channels. The App serves different users segments (citizens, residents and visitors, in addition to private sector). The application services were divided to direct services that everyone can use without ID verification. Other services are available only after ID verification for privacy purposes. It uses PKI authentication provided by ITA as an official mean to verify user’s identity.</p> <p>After PKI authentication, the user transactions and requests will be displayed with the possibility of completing and renewing the service electronically. The App contains important features that help users manage their register and transactions with MM, for example, a dashboard backed with graphical reports in addition to interactive maps showing the location of user's property.</p> <p>The application achieved many awards, the most important of which are the Sultan Qaboos Award for Excellence in eGovernment and the Sheikh Salem Al-Sabah Award.</p> <p>The application recorded a daily average use of 1,552 with a daily download average of 27 users.</p>
Aims	To improve ways of work, i.e. to make some things even better
Achievements	<p>Baladiyeti plays a significant role in saving time, effort and financial costs for beneficiaries and MM.</p> <p>The app makes it easy to access services at any time from any place. It guarantees smooth & immediate transactions completion. The app services are done with less procedure and documents. This leaves a positive impact on environment and reduces CO₂ emission by dispensing the use of vehicles to reach traditional service provision channels.</p> <p>The app contributes to increasing user satisfaction, especially when communicating with MM by utilizing smart phones features e.g. GPS and sending pictures which helps in delivering correct and clear information to MM. It contributes to dealing with the complaint more quickly. The app also helped solving some of the challenges that faced users in some e-services provided by other e-channels, for example, in parking service using SMS (more than 4,000 tickets per day), many cases fail due to errors from the user in the message format or service number. The app offers this service in a simplified way just by selecting the vehicle and time.</p> <p>The number of app users exceeded 11,500 in a short period with download rate of 27 people daily. More than 188810 service requests were registered with 64.47% informational service, 26.07% interactive with MM contact center and .946% transactional services. This indicates an increase in app use rate & it is expected to increase more as MM intends to close some of the traditional services provision channels.</p> <p>MM success in (Baladiyeti) is a great step in achieving the digital transformation plan objectives as the app makes it possible to complete several e-services autonomously and immediately without any direct intervention from MM staff e.g. the app allows the completion of a number of transaction 14233 by their owners such as rent contracts, building license and parking permission</p>

	<p>contributing thereby in reducing customers number in customer service halls and solving congestion problem; in addition to increasing productivity among MM employees by saving time and effort to focus on completing other transactions, which in turn helps MM to serve the community and increase customers satisfaction. The app also contributed to reducing the documents stored by MM, thereby save effort for MM in managing them achieving also a positive contribution to environment preservation by applying paperless concept.</p> <p>Contribute to the realization of equality principle in services provision.</p> <p>Supporting national initiatives in the field of e-government through the use of many of unified government services, such as PKI in identity verification, which contributes to encouraging beneficiaries to activate the service as they can benefit from it in other government services.</p>
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**1.8. HASHEMITE KINGDOM OF JORDAN HIGHER COUNCIL FOR SCIENCE & TECHNOLOGY
CONTRIBUTED EXAMPLE: CENTER OF EXCELLENCE FOR INNOVATIVE PROJECTS**

Respondent: Top Level

Initiative	Center of Excellence for Innovative Projects
Actor	Jordan University of Science and Technology
Place	Throughout Muscat, Sultanate of Oman.
Timeline	<p>Planning: NA</p> <p>Decision: NA</p> <p>Implementation: 04/2016 - Ongoing</p>
Motivation	The Center supports pioneering and creative initiatives that benefit the university or the community or contribute in solving economic, social, academic or health problems, to achieve sustainable development.
Aims	<p>To improve ways of work, i.e. to make some things even better</p> <p>To meet new needs, that did not exist before</p>
Achievements	The Center organized 4 workshops on robotics design, launched a competition for designing the Center logo, and also organized two seminars on Intellectual Property and patents.

**1.9. HASHEMITE KINGDOM OF JORDAN SOCIAL SECURITY CORPORATION CONTRIBUTED EXAMPLE:
GREEN BUILDING PRACTICES: IMPLEMENTING PHOTOVOLTAIC CELLS PILOT PROJECT AND
PHOTOCELLS**

Respondent: Entry to Middle Level

Initiative	Green Building Practices: Implementing Photovoltaic Cells Pilot Project and Photocells.
Actor	Social Security Corporation – External Environmental Analysis and main stakeholder was Ministry of Energy and Mineral Resources.
Place	<p>Retiree building – Amman (Pilot project – Photovoltaic Cells).</p> <p>Social security branches – all over the Kingdom (photocells).</p>

Timeline	Planning: 2012 Decision: 02/2013 – 12/2013 Implementation: 04/2014 - Ongoing
Motivation	Comply with Government vision to reduce managerial expenses. Reduce electricity consumption at retiree building. Reduce energy consumption in SSC-owned buildings
Aims	To comply with some broader policies or strategies To meet new needs, that did not exist before
Achievements	Achieve 70% reduction in electricity bills at retirees building. Reduce energy consumption at social security branches by implementing photocells for 12 buildings, and light emitting diode (LED) lights for 11 branches.

**1.10. HASHEMITE KINGDOM OF JORDAN SOCIAL SECURITY CORPORATION CONTRIBUTED EXAMPLE:
UTILIZE SOCIAL MEDIA IN MEDIA CENTER CAMPAIGNS**

Respondent: Entry to Middle Level

Initiative	Utilize Social Media in Media Center Campaigns
Actor	Media Center at the Social Security Corporation
Place	Web-based
Timeline	Planning: 2012 Decision: 2012 Implementation: 2012 – Ongoing
Motivation	Technological analysis revealed the need to reach a broader group of citizens using the web, and social media usage reports showed the high interest in it, so it was considered as an effective tool to reach target groups. Increase the awareness about social security law and regulations.
Aims	To improve ways of work, i.e. to make some things even better
Achievements	Social Security Facebook page became one of the most important tools to reach insured people, and give them right information and advices. Number of likes till 8/2017 : 41,164 likes. Average number of questions received quarterly : 800; however for the second quarter 2017 approximate response rate reached 98%.

**1.11. HASHEMITE KINGDOM OF JORDAN HIGHER COUNCIL FOR SCIENCE & TECHNOLOGY
CONTRIBUTED EXAMPLE: NATIONAL CENTER FOR INNOVATION**

Respondent: Top Level

Initiative	National Center for Innovation.
Actor	The Center was proposed as a project in the National Innovation Strategy 2013-2017, it is now in the process of establishment. The establishment will be funded by the MENA Transition Fund and managed by the European Bank for Reconstruction and Development for the first two years, after that it will be funded by the government.
Place	The Center will be established as an independent institution in Jordan in all its regions.
Timeline	Planning: 2013 - 2014 Decision: 02/2015 Implementation: 09/2017 – Ongoing
Motivation	The NCI will be the national one-stop information and referral hub for all activities in the country related to innovation and private sector development by coordinating national and international administrative, financial and technical services to nurture and support innovation advancement. NCI will also provide legal/regulatory advocacy and advisory services to small and medium enterprises while creating a feedback mechanism to the government to ensure best practice and transparency. Finally, all coordinating activities of the NCI will be wrapped into a robust technology platform that will combine existing data resources with the data to be collected in order to coordinate resource referrals, monitor and evaluate innovation activities and other key performance indicators reflective of economic shifts towards innovation.
Aims	To solve problems, i.e. to rectify things that were wrong To improve ways of work, i.e. to make some things even better To meet new needs, that did not exist before To comply with some broader policies or strategies
Achievements	The project of the establishment of the National Center for Innovation has gone through a mapping study for the innovation ecosystem in Jordan, they have come up with a full report, they also selected a steering committee for the NCI and finally they are in the process of selecting the project management consultant for the coming two years of its establishment.

**1.12. SULTANATE OF OMAN INFORMATION TECHNOLOGY AUTHORITY CONTRIBUTED EXAMPLE:
eCLEARANCE SYSTEM**

Respondent: Middle to Top Level

Initiative	eClearance System. eClearance system is designed as a single integrated system for processing foreign worker permits online.
Actor	eClearance is planned, decided and implemented by the Ministry of Manpower.
Place	Throughout the country.

Timeline	<p>Planning: NA</p> <p>Decision: NA</p> <p>Implementation: NA</p> <p>Launch: 10/2013</p>
Motivation	eClearance services were initiated by MoMP to deliver a PKI single-sign-on, ePayment-enabled end-to-end services for the private sector, citizens and residents through multiple channels like website, mobile applications and other service centers.
Aims	<p>To improve ways of work, i.e. to make some things even better</p> <p>To meet new needs, that did not exist before</p>
Achievements	<p>The impact of this initiative has provided online quality services 24x7 allowing citizens, residents and 193,211 private sectors to access all eClearance services as a one-stop to enhance satisfaction. The system covers functionalities like sign-entry-point, primary key identification, multi-channels support, timely notification, end-to-end case tracking, and overall dashboard and secure environment.</p> <p>The eClearance System has promoted, facilitated and coordinated the cases of 99,000 monthly applications processing, 87,840 foreign worker permits processed for visas, 17,061 work contracts terminated by private sectors, 5,782 workers resigned from their jobs, 1,785 work contracts registered online, 25,985 foreign workers departing from the country, 19,857 workers illegally leaving their employers and 1,833 cases of workforce violations.</p> <p>Impact on Business Community are enabling user to pay through ePayment Gateway, multiple online eservices providing a single identity, scalable multi-factors authentication security. Enabling user, using PKI access in identification, integrity and non-repudiation for online transactions for e-services. Facilitating the eservices through alternate channels in a manner that is convenient for the citizens, aligned with their expectations and aspirations. Providing reports and statistics for decision makers to improve government functions and training initiatives. Ensuring citizen's rights are preserved through monitoring employers' compliance with labour law. Reducing the travelling time and cost to the public. More impacts on service providers are cutting process costs - improving the data flow without manual input, eliminating use of paper by cutting financial and time costs</p> <p>Automating filtration process helped MoMP employees to perform other tasks, reducing traffic at counters and human error during the process. Aligning business, speeding-up decision-making, unifying the coding, improving communication and information flow, reducing paper use, transparency, accountability and service delivery. Removing redundant manual government procedures, eventually increased effective 24x7 online services and productivity of Government employees. Providing labour market with statistics and information to enable decision making in Oman. Protecting the rights of workforce especially vulnerable group which are prescribed by law, and providing them with the safe work environment. Facilitating the provisioning of vocational and technical training to develop and enhance the citizen skills.</p> <p>SANAD Service Centers are a MoMP-initiated concept and its continuing to support these centers for providing Omani nationals with the chance to become an entrepreneur and to create more job opportunities for nationals.</p>

**1.13. HASHEMITE KINGDOM OF JORDAN MINISTRY OF PLANNING AND INTERNATIONAL COOPERATION
CONTRIBUTED EXAMPLE: JORDAN'S RESPONSE TO MITIGATE THE IMPACT OF SYRIA CRISIS ON
JORDAN**

Respondent: NA

Initiative	Jordan's Response to Mitigate the Impact of Syria Crisis on Jordan
Actor	<p>The Government of Jordan has been taking a leading role in bringing development and humanitarian responses to the Syria crisis under one integrated planning and coordination framework. To this purpose, the Ministry of Planning and International Cooperation (MoPIC) sought to establish a nationally-led coordinated Platform for humanitarian and development assistance.</p> <p>The UN country team in Jordan has committed to strongly support this initiative and support MoPIC in building its capacities to address the impact of the crisis on the country through the 'UN Joint Support to the Jordan National Response to the Syria Crisis'.</p> <p>The EU delegation in Jordan, through the project entitled 'EU's support to the existing Syria crisis response coordination framework established by the Government of Jordan' has provided support to specific sectors at the line ministries level, provided support to establishing linkages with other national planning processes and to aid management system in MoPIC.</p>
Place	<p>This is a national effort that was implemented at MoPIC and other relevant national institution level (i.e. relevant line ministries and task forces).</p> <p>The Ministry of Planning and International Cooperation hosts the Secretariat that has been entrusted with the responsibility of providing policy support and technical assistance to MoPIC and other stakeholders, and to ensure the operationalization of decisions taken by the Platform.</p>
Timeline	<p>Planning: 2014</p> <p>Decision: 2014</p> <p>Implementation: 2015 – Ongoing</p>
Motivation	<p>To strengthen the capacity of the government of Jordan represented by the MoPIC to lead Government of Jordan response to the Syrian crisis through policy advice, strategic planning, aid coordination, monitoring and evaluation, information management and advocacy.</p> <p>Upscale critical capacities of the central, regional and local authorities to plan, program, coordinate and implement the development response, in order to manage and mitigate the impact of the crisis in a timely, efficient and effective manner.</p> <p>Foster the resilience of: The service delivery system at both national and local levels, and mitigate the negative impacts on health, education, water and sanitation, in a cost-effective and sustainable manner; Municipal services and infrastructure in areas critically affected by demographic stress, including solid waste management, housing, and energy sectors, thereby advancing more cost-effective and sustainable solutions.</p> <p>Meet the immediate humanitarian needs of: Syrian refugees in and out of camps; Vulnerable Jordanians affected by the Syria crisis.</p> <p>Expand employment and livelihood opportunities, and strengthen the coping mechanism of the most vulnerable segments affected by the crisis.</p> <p>Mitigate pressures, including social imbalances on Jordanian host communities.</p> <p>Support the government budget to cope with the financial burdens resulting from the Syria crisis.</p> <p>Mitigate pressures on the environment and ecosystem services.</p>
Aims	<p>To solve problems, i.e. to rectify things that were wrong</p> <p>To improve ways of work, i.e. to make some things even better</p> <p>To meet new needs, that did not exist before</p>

	To comply with some broader policies or strategies
Achievements	<p>Collective action to better support Syrian refugees and Jordanian people, communities and institutions.</p> <p>Building institutional capacities and promoting partnership with major stake holders i.e. donors, UN and NGOs.</p> <p>Ensure that critical humanitarian measures and medium term interventions are better integrated, sequenced and complemented.</p> <p>Reflecting the government’s commitment to realizing the principles of Paris and other declarations of aid management, national ownership, maintaining alignment with local systems, harmonization and mutual accountability.</p> <p>Meet the humanitarian needs of Syrian refugees and of the Jordanian population impacted by the crisis, while striving to foster the resilience and effectiveness of Jordan’s service delivery system..</p>

1.14. ARAB REPUBLIC OF EGYPT CABINET OF MINISTRIES CONTRIBUTED EXAMPLE: ESTABLISH EGYPT NATIONAL GRID REFERENCE

Respondent: Top Level

Initiative	Establish Egypt National Grid Reference
Actor	Planning &Implementation agency: The Ministry of Planning, Monitoring, and Administrative Reform is supervising the implementation which is being carried out by a number of governmental stakeholders
Place	Across the whole country. On the national level.
Timeline	<p>Planning: 01/2014 – 04/2014</p> <p>Decision: 04/2014 – 05/2014</p> <p>Implementation: 06/2014 – 2020</p>
Motivation	<p>Establish a reference system for digital spatial addressing through which a digital spatial database can be constructed to support land use planning and investment.</p> <p>Establish a digital address for the land – and therefore the above structures and the infrastructure under it – with a precision that suits the needs of different applications (can be accessed by numerical addresses per square meter).</p> <p>Provide a digital information infrastructure to support the development of the national investment plan, in addition to, facilitating marketing the investment opportunities to both foreign and local investors.</p> <p>Integrate the national databases that would use the spatial data such as: real-estate taxes, agricultural real-estate registry, real-estate registry, planning the use of state owned lands, population census, etc.</p>
Aims	<p>To improve ways of work, i.e. to make some things even better</p> <p>To meet new needs, that did not exist before</p>
Achievements	The Central Agency for Public Mobilization and Statistics which is responsible for conducting censuses, linked the census database with the digital reference numbers (squares addressing

	numbers). The last census was conducted earlier this year. This is considered a great achievement because it provided more concrete information about what exists on each and every square (houses, companies, gardens, governmental buildings, etc.) and registered these findings in a database. This is considered the building block in establishing the spatial data and spatial planning infrastructure to collect and use demographic and topographic information and services to determine the optimal size of all services provided to citizens in a given location.
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**1.15. HASHEMITE KINGDOM OF JORDAN HIGHER COUNCIL FOR SCIENCE & TECHNOLOGY
CONTRIBUTED EXAMPLE: SUPPORT TO RESEARCH, TECHNOLOGICAL DEVELOPMENT AND
INNOVATION IN JORDAN**

Respondent: Top Level

Initiative	Support to Research, Technological Development and Innovation in Jordan.
Actor	The project was proposed by the Higher Council for Science and Technology and funded by the European Union.
Place	The project was implemented in Jordan.
Timeline	Planning: NA Decision: NA Implementation: 02/2014 – 02/2017
Motivation	Increase the contribution of Jordan's research & technological development and innovation sectors to Jordan's economic growth and employment
Aims	To solve problems, i.e. to rectify things that were wrong To improve ways of work, i.e. to make some things even better
Achievements	The project provided 62 grants for Jordanian researchers who had innovative ideas in science and technology, 19 grants were for commercialization research projects, and 43 for applied research projects. Through this project, a network of technology transfer officers was established across the universities, research centers and industry-related institutions.

**1.16. SULTANATE OF OMAN INFORMATION TECHNOLOGY AUTHORITY CONTRIBUTED EXAMPLE:
INVEST EASY INITIATIVE**

Respondent: Middle to Top Level

Initiative	Invest Easy Initiative.
Actor	Ministry of Commerce and Industry.
Place	Throughout the country. For all investors who want to invest in Oman.
Timeline	Date of project launch: 2014/04. Implementation Phase:

	<p>The diagram illustrates the project timeline for the Invest Easy initiative. It starts with 'Dec, 8, 2013 Contract Signing'. The milestones are as follows:</p> <table border="1"> <thead> <tr> <th>Milestone</th> <th>Start Date</th> <th>End Date</th> <th>Portal Version</th> <th>Mobile App Version</th> </tr> </thead> <tbody> <tr> <td>Milestone 1</td> <td>Dec, 8, 2013</td> <td>May, 4, 2014</td> <td>Portal V.1</td> <td>Mobile App V.1</td> </tr> <tr> <td>Milestone 2</td> <td>May, 6, 2014</td> <td>Sep, 30, 2014</td> <td>Portal V.2</td> <td>Mobile App V.2</td> </tr> <tr> <td>Milestone 3</td> <td>Oct, 1, 2014</td> <td>Apr, 4, 2015</td> <td>Portal V.3</td> <td>Mobile App V.3</td> </tr> <tr> <td>Milestone 4</td> <td>Apr, 5, 2015</td> <td>Dec, 6, 2015</td> <td>Portal V.4</td> <td>Mobile App V.4</td> </tr> <tr> <td>Milestone 5</td> <td>Dec, 7, 2015</td> <td>Mar, 31, 2016</td> <td>Portal V.5</td> <td>Mobile App V.5</td> </tr> <tr> <td>Milestone 6</td> <td>Apr, 1, 2016</td> <td>Jul, 31, 2016</td> <td>Portal V.6</td> <td>Mobile App V.6</td> </tr> </tbody> </table>	Milestone	Start Date	End Date	Portal Version	Mobile App Version	Milestone 1	Dec, 8, 2013	May, 4, 2014	Portal V.1	Mobile App V.1	Milestone 2	May, 6, 2014	Sep, 30, 2014	Portal V.2	Mobile App V.2	Milestone 3	Oct, 1, 2014	Apr, 4, 2015	Portal V.3	Mobile App V.3	Milestone 4	Apr, 5, 2015	Dec, 6, 2015	Portal V.4	Mobile App V.4	Milestone 5	Dec, 7, 2015	Mar, 31, 2016	Portal V.5	Mobile App V.5	Milestone 6	Apr, 1, 2016	Jul, 31, 2016	Portal V.6	Mobile App V.6
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<p>Motivation</p>	<p>The main purpose of the Invest Easy initiative is to provide citizens, entrepreneurs, prospective investors and businesses with the services and information they need quickly and efficiently. This helps transform Oman into a country with easy, reliable and transparent business environment.</p> <p>To reach this goal, the following objectives have been set:</p> <ul style="list-style-type: none"> Fast and efficient licensing and registration processes within a relatively short period of time. A single online entry point for the Business community to access government services and information. Flexible, easy and transparent interaction between the Business Community and the Government. Multi-channel access to services for the investors and service providers (SANAD, lawyers and auditors): web application, mobile application, web services, and service providers. A trustworthy and secure environment for businesses to conduct transactions. Effective and efficient delivery of services 24 hours. Easy method for e-payment. 																																			
<p>Aims</p>	<p>To improve ways of work, i.e. to make some things even better</p> <p>To meet new needs, that did not exist before</p>																																			
<p>Achievements</p>	<p>Impact on people/businesses and business environment:</p> <ul style="list-style-type: none"> Simple, fast, convenient & transparent company registration, annual report submission, licensing activity, access to business information and e-participation (online). Save time, effort and cost on businesses. <p>Impact on general public:</p> <ul style="list-style-type: none"> Improved availability of services for the vulnerable parts of population. Positive effect on economy (entrepreneurship increased). Portrayal of an image of a forward-thinking country as UNCTAD has rated the project among the best business-oriented whole-of-government projects. Used by the Lawyer Community and the SANAD centers (Omani Entrepreneurs Program) spread across Oman. Reduced the need for carrying around paper certificates (officials in other ministries get the data from Invest Easy system). Public has savings of 7.3 million OMR as there is no need to physically visit the government entities. <p>General impact:</p> <table border="1"> <thead> <tr> <th><u>Parameter</u></th> <th><u>Before</u></th> <th><u>After</u></th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	<u>Parameter</u>	<u>Before</u>	<u>After</u>																																
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Days to start business	7 days	minutes to 1 day
Number of processes	18	4.5
Number of interactions	17	0 or 1 max
Number of companies per year	4,000	59,512
Number of licenses per year	25,000	16,603
77 Portal e-Services 25 Mobile Services 63 Back Office Services Virtual One Stop Shop Other Positive impact includes: Save time, effort and cost for Government & Investors. Support Service Provider Centers (SMEs). Lower load on Ministry staff. Full electronic process with integrated entities. Advantage of using the resources in back office and increase the service quality. Attract more investors due to ease of doing business. More trust in Government and business environment. Increase Government Revenue. More information is found in the following webpages: Invest Easy Portal: https://business.gov.om/wps/portal/ecr https://www.youtube.com/watch?v=hnZd-yOwTos&list=PLCiU02zkzvKmU2yMyptYp-2yGRxADfFPo		

**1.17. HASHEMITE KINGDOM OF JORDAN SOCIAL SECURITY CORPORATION CONTRIBUTED EXAMPLE:
DEVELOP BUSINESS AUDIT DIVISION**

Respondent: Entry to Middle Level

Initiative	Develop Business Audit Division.
Actor	Employees at the Social Security Corporation provided it as a suggestion to the upper management
Place	Head office – Amman (affecting internal operations).
Timeline	Planning: 05/2014 – 06/2014 Decision: 07/2017 Implementation: 06/2015 - Ongoing
Motivation	Suggestion from employees to improve the tools used to achieve daily work, and to be able to track and measure efficiency for current tools

	Apply efficient tools in performing any work. Keep up to date with any new methods in job performing.
Aims	To improve ways of work, i.e. to make some things even better
Achievements	This division was placed at the hierarchy since July 2015. The division was activated during January 2017 through building capacity for the team.

**1.18. HASHEMITE KINGDOM OF JORDAN MINISTRY OF PUBLIC SECTOR DEVELOPMENT CONTRIBUTED
EXAMPLE: INNOVATION INCUBATOR**

Respondent: Entry to Middle Level

Initiative	Innovation Incubator
Actor	Ministry of Public Sector Development.
Place	The Hashemite Kingdom of Jordan.
Timeline	Planning: 06/2014 – 11/2014 Decision: 12/2014 Implementation: 2015 - Ongoing
Motivation	Enhance public sector performance. Enhance public services and citizens' satisfaction. Consolidate good governance principles. Enhance investment environment. Cut government spending. Increase revenues. Enhance work environment. Human resources development. Other relevant objectives.
Aims	To solve problems, i.e. to rectify things that were wrong To improve ways of work, i.e. to make some things even better To meet new needs, that did not exist before To comply with some broader policies or strategies
Achievements	The first and second phases of the incubator were launched in 2015 and 2016. 13 winning ideas were appreciated/ honoured; the implementation of these ideas has started. The third phase was launched, and the implementation of the evaluated ideas has started. Ideas' owners are honoured by thanking letters and the winners are given money prize as an appreciation for their efforts.

**1.19. HASHEMITE KINGDOM OF JORDAN MINISTRY OF INFORMATION AND COMMUNICATION
TECHNOLOGY CONTRIBUTED EXAMPLE: OPEN GOVERNMENT DATA POLICY**

Respondent: Middle to Top Level

Initiative	Open Government Data Policy
Actor	Ministry of Information and Communication Technology. Ministry of Planning and International Cooperation
Place	The Open Government Data Policy will be applied in all Government Entities throughout the country.
Timeline	Planning: 2015 – 07/2017 Decision: 07/2017 – 08/2017 Implementation: 08/2017 - Ongoing
Motivation	In accordance with the provisions of Article (8) of the Law of Right to Access to Information No. 47/2007, and Based on the Jordan’s Third National Plan 2016-2018, under the Open Government Partnership Initiative, commitment number (10), that stipulates to implement an open government data sources policy, through using technology in order to facilitate access to governmental information and increase government action’s transparency and accountability. Transparency and Enhance confidence in the government’s performance. Encouraging innovation in the provision of more responsive services important to people, pioneers, businesses and all relevant stakeholders. Increase the participation of civil society in policy and decision-making process. Social and Economic benefits: (a) attracting new investors; (b) stimulate the co-creation of public goods and services between government and non-Government actors; (c) reducing unemployment through providing tools that initiate new income resources; and (d) allow end users to utilize OGD for studies and statistical analysis.
Aims	To meet new needs, that did not exist before To comply with some broader policies or strategies
Achievements	Launch the Open Government Data Policy officially in 7/2017. Launch the open government data platform within the Jordan portal www.jordan.gov.jo in 8/2017. The platform contains three datasets which are available for public in the platform (Economy and business, Tourism and Archaeology, and Population and Community).

**1.20. HASHEMITE KINGDOM OF JORDAN MINISTRY OF PLANNING AND INTERNATIONAL COOPERATION
CONTRIBUTED EXAMPLE: INFORMATION SYSTEM FOR JORDAN RESPONSE PLATFORM FOR SYRIA
CRISIS (JORISS)**

Respondent: NA

Initiative	Information System for Jordan Response Platform for Syria Crisis (JORISS) In order to ensure that the Jordan Response Platform for Syria Crisis has an accurate understanding of funds disbursed in support of the JRP2015 as well as a clear picture of activities
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	implemented on the ground, MOPIC supported by the Jordan Response Platform for Syria Crisis Secretariat has put in place the Jordan Response Information System for the Syria Crisis (JORISS, http://www.jrpssc.org/systemlogin/), which is an online system that allows users to submit their projects online, track the status of their request for approval and periodically report on their project progress.
Actor	Ministry of Planning and International Cooperation The Jordan Response Platform for the Syria Crisis is the strategic partnership mechanism between the Government of Jordan, donors, UN agencies and NGOs for the development of an integrated refugee, resilience-strengthening and development response to the impact of the Syria crisis on Jordan: the Jordan Response Plan (JRP).
Place	The Ministry of Planning and International Cooperation established the Jordan Response Information System for the Syria Crisis (JORISS) which is a national system that ensures a reliable and highly transparent framework for accurate reporting on projects related to the Jordan Response Plan for the Syria Crisis.
Timeline	Planning: 2015 Decision: 2015 Implementation: At the beginning of 2017, the new version of the JORISS (3.0) system was launched, which includes an interface that facilitates reporting, tracking and approval.
Motivation	To ensure transparency of aid effective management to protracted crisis. To provide major stakeholders with proper and reliable data and to inform decision making process. To simplify and facilitate project approvals, reporting and monitoring. To ensure efficient and effective use of aid money by ensuring its adherence to national priorities.
Aims	To solve problems, i.e. to rectify things that were wrong To meet new needs, that did not exist before To improve ways of work, i.e. to make some things even better To comply with some broader policies or strategies
Achievements	JORISS provided a fast and structured mechanism that allowed all implementing partners to submit, track and report on their projects related to the Jordanian Response Plan to the Syria Crisis. The System allowed financial tracking per sector, donor and location. It provided regular monitoring updates to MOPIC and Task Forces on progress achieved, targets met, and funding status. The System provided a resource library consisting of over 190 documents related to the Syria crisis, thereby allowing users to filter, search, and download available documents directly.

**1.21. HASHEMITE KINGDOM OF JORDAN SOCIAL SECURITY CORPORATION CONTRIBUTED EXAMPLE:
APPLYING INTERNATIONAL SOCIAL SECURITY ASSOCIATION (ISSA) GUIDELINES**

Respondent: Entry to Middle Level

Initiative	Applying International Social Security Association (ISSA) guidelines.
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Actor	ISSA Office at the Social Security Corporation.
Place	Head office – Amman (affecting internal operations).
Timeline	Planning: 2015 Decision: 2015 Implementation: 2016 – 2019
Motivation	To support the Social Security Corporation’s vision on ‘Comprehensive social security attaining excellence in service, protection and sustainability that contributes to Jordan’s development Improve internal policies, practices, and operation at Social Security Corporation by applying best practices recognized internationally.
Aims	To solve problems, i.e. to rectify things that were wrong To meet new needs, that did not exist before
Achievements	5 guidelines were translated to Arabic by internal efforts. Gap analysis was completed for 2 guidelines, and corrective actions were scheduled and added to operational plans for relevant departments.

**1.22. HASHEMITE KINGDOM OF JORDAN MINISTRY OF INFORMATION AND COMMUNICATION
TECHNOLOGY CONTRIBUTED EXAMPLE: ESTABLISHMENT FOR A GOVERNMENT ACCOUNT ON
APPLE AND GOOGLE STORES**

Respondent: Middle to Top Level

Initiative	Establishment of a Government Account on Apple and Google stores
Actor	eGovernment Programme at the Ministry of Information and Communication Technology.
Place	All government agencies at the Hashemite Kingdom of Jordan
Timeline	Planning: 08/2015 – 07/2016 Decision: 07/2016 – 07/2016 Implementation: 08/2016 – 09/2016
Motivation	Reduce time and support effort for government mobile applications. Ease access to centralized government account on both stores (Google and Apple). Provide Search capability as one of the most frequently used methods for citizen to discover and download apps from the App Store.
Aims	To solve problems, i.e. to rectify things that were wrong To meet new needs, that did not exist before
Achievements	Overseeing percentage of use for the uploaded Apps by Jordan Government. Define areas of enhancement through communicating with citizens on the collaboration area of the store.

**1.23. KINGDOM OF BAHRAIN INFORMATION & E-GOVERNMENT AUTHORITY CONTRIBUTED EXAMPLE:
FIX2GO**

Respondent: Top Level

Initiative	Fix2Go
Actor	This initiative was a result of the cooperation and shared efforts between different governmental entities including Information and eGovernment Entity who established the solution, along with other entities that provide different services to public sector like Ministry of Health, Electricity and Water Authority, Ministry of Works, Municipalities Affairs and Urban Planning and many other entities. iGA – the solution provider – was established on 2017 and its main purpose was to provide government services electronically. In October 2015, the eGovernment Authority has merged with the Central Informatics Organisation to form an entirely new entity under the unified name of the Information & eGovernment Authority (iGA). The iGA conducts several responsibilities such as proposing public policies, suitable legislations and decisions for the implementation of the eGovernment programs as well as necessary information technology and data programs. Others include providing services, facilitating communication between all country organisations, creating online channels to deliver eGovernment services in addition to offering technical and scientific support to ministries along with other government organizations
Place	Fix2Go is a national initiative; it is being sponsored by the national leadership represented by the office of First Deputy Prime Minister. Also, Fix2Go is being supported by an effective and wide participation of many government entities that are responsible to resolve and act on the reported cases and problems. Fix2Go is implemented to serve public sector across the whole country. Any citizen, resident or even visitor to Bahrain can use Fix2Go through Tawasul Mobile Application to submit any case or to report an issue to any of the government entities included in the system. Examples on the kind of issues on which public can raise any case includes Street Lighting, Traffic Signals Maintenance, Waste Dumping Violations, Expired Food Products Sanitary Maintenance, Electricity Outage and many others.
Timeline	Initiating: 02/2015 Planning: 01/2016 Decision: 02/2016 – 03/2016 Implementation: 04/2016 – 04/2016
Motivation	Establishing a direct and easy channel and means of communication with government entities regarding suggestions and complaints which are characterized by efficiency and transparency. Communicating easily and quickly with government entities; ability to submit a case and getting it solved within a very short time. Increasing and facilitating interaction with government entities and ability to provide feedback about the efforts undertaken to issue. Supporting the usage of smart devices in government services, through using the different features available in this kind of devices like photo capturing and location services.
Aims	To solve problems, i.e. to rectify things that were wrong To meet new needs, that did not exist before

Achievements	<p>Achieving high level of interaction between the public and government sector, and facilitating the quick communication with officials easily without any discrimination.</p> <p>Reducing the time and effort required to communicate and report issues to government entities. Ideally, submitting any case will not require more than 30 seconds. And this was achieved through the attractive and easy to use design of Fix2Go screen, requesting the user to enter the minimum amount of information needed to submit a case.</p> <p>Fix2Go became a very effective tool through which public sector is helping and supporting government sector in achieving citizens' welfare and providing different governmental utilities in the best possible level.</p> <p>Fix2Go is provided through a very effective and easy accessible channel and it is available 24/7 in the hands of all the public.</p> <p>Achieving high level of customer satisfaction and this has been achieved through effective communication between both parties (customer and government entity.) Also, each entity is required to solve the cases within a specific time period which is determined earlier for each entity and based on the case type.</p>
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1.24. STATE OF PALESTINE MINISTRY OF TELECOM & IT CONTRIBUTED EXAMPLE: GOVERNMENTAL MOBILE APPLICATIONS COMPETITION

Respondent: Top Level

Initiative	Governmental Mobile Applications Competition.
Actor	Ministry of Telecom & IT.
Place	The initiative targets all Palestinian origins everywhere.
Timeline	<p>Planning: 12/2015 – 02/2016</p> <p>Decision: 03/2016 – 03/2016</p> <p>Implementation: 04/2016 – 07/2017</p>
Motivation	<p>Encourage the Palestinian developers to produce governmental applications.</p> <p>Serve and support the e-government project with qualitative and vital applications.</p> <p>Encourage the Palestinian governmental organizations to automate the services and information they provide to the public.</p> <p>Promote the culture of innovation and creativity in the Palestinian society.</p> <p>Enhance the role of information and communication technology in improving the quality of life in Palestine.</p>
Aims	<p>to meet new needs, that did not exist before</p> <p>to meet new needs, that did not exist before</p>
Achievements	<p>Winning applications could be adopted and utilized by governmental institutions which leads to serve the public in a better way.</p> <p>Developers have a chance to market themselves and their applications, and have received additional support and motivation to produce more governmental applications.</p>

	Application could be a qualitative addition to the eGovernment project in Palestine.
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**1.25. SULTANATE OF OMAN INFORMATION TECHNOLOGY AUTHORITY CONTRIBUTED EXAMPLE:
PARENT MOBILE APPLICATION**

Respondent: Middle to Top Level

Initiative	Parent Mobile Application
Actor	Ministry of Education
Place	Parent Mobile App is designed to facilitate delivery of critical services for parents to make it easier for them to follow up their kids' achievement level, attendance in classrooms and behavioural discipline, as well as to communicate with those in charge of educational processes in the schools. The services are covered for all parents in Sultanate of Oman.
Timeline	Parent Mobile Application was launched in the headquarters of Ministry of Education on 2016/01.
Motivation	<p>Improve the parent interaction with school administration by having services available from any location and at any time through the app.</p> <p>Allow the parents to report complaint/observation instantly from anyplace to ensure their knowledge of all related to their kids' regularity and ethical behaviour.</p> <p>Facilitate parents to initiate transfer of their kids' record between different schools in Oman with features like notifications, tracking to closure.</p> <p>Provide parents with facility of following student school timetable where they can view their kids' schedule as well as follow up on their kids' academic results.</p> <p>Provide parents with access to notifications for all school's activities and events and allow them to closely follow school activities easily.</p>
Aims	To improve ways of work, i.e. to make some things even better
Achievements	<p>For Google Play the number of downloads in Android platform from the beginning of the launch is 94,721.</p> <p>For App Store for iOS the number of downloads in iOS platform from the beginning of the launch is 24,044.</p> <p>Total number of registered parents in the Education Portal is 345,557 and the number of parents having downloaded the app is 195,075 (Android and iOS).</p> <p>Parent Mobile App contributes in increasing customer satisfaction of the parents, for it enable the parents to closely follow up their students through tablets and smart phones without the need to use computers as before. The technical support of the application and the possibility of developing the application by adding more screens and new services contribute in increasing the parents' satisfaction on the electronic application.</p> <p>Ministry of Education in Oman is a non-profit government establishment that provides education across the country with zero charge. Therefore, the electronic services are designed and delivered to beneficiaries in order to enhance the education system. In addition, creating channels between service provider and users. Moreover, increasing the efficiency by enabling beneficiaries to cope with technology by improving the interactions.</p> <p>However, the ministry formulated a different aspect that considered an achievements level. For instance, the capability of creating a private channel to communicate with school administrators played a role in reducing the time needed and effort. Regardless, the availability and flexibility</p>

	<p>for beneficiaries. The impact result towards Go Green by reducing the large number of paper consumed. For example, student records are no longer kept as physical documents. Therefore, replacing the physical with advantage of incrimination and securely saved in internal servers.</p> <p>Most transactions counted in last few months done by mobile. That could be considered as an achievement as the application gets widely used.</p> <p><u>Qualitative Return</u></p> <p>Less /no queue at ministries.</p> <p>Savings on paper.</p> <p>Savings on store room space for archiving papers and files.</p> <p>Saving on citizens and ministries efforts and time for collecting the documents manually.</p> <p>Savings on petrol (environmental benefits).</p> <p>The app contributes in reducing the time and effort required in the past to provide the service for the user. The user now can follow up the student absence, timetable, bus, and academic achievements and transfer their students from one school to another by one click at their smart phone or tablet while in the past the parents had to visit the school themselves.</p> <p>The app also saved time, effort and money of the parents as they can interact easily with the school administrations and teachers through the application.</p> <p>Parent Mobile App has decreased the traffic on the other delivery channels thereby drastically reducing costs and services time.</p> <p>1. Cost Reduction</p> <p>The App helps in reducing traffic off the beneficiary (parents) halls, hotline, and fax machines, thereby has cut costs pertaining to the operational excellence, maintenance and administration, and expansion of these channels.</p> <p>The reduced number of traffic has enabled the Ministry of Education to retain less number of staff at parents' halls, which enables administration to do easy management of teams and focus more on the improvement of services.</p> <p>2. Time Reduction</p> <p>The App helps reduce the service time at parents halls by minimizing the customer queues.</p> <p>In the complaint resolution process enormous time is saved.</p> <p>3. Complaint lodging facility</p> <p>Before: Parents used to take several hours to lodge a complaint with the school administration as they have to travel physically to the regional directorate. At some places the regional office are 80km away from the parent place. Complaints resolution was taking several days to few weeks to resolve the complaint.</p> <p>After: The App now allows the whole process of complaint logging to 5 minutes on average and its resolution to an average of a few hours only.</p>
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**1.26. STATE OF QATAR MINISTRY OF TRANSPORT AND COMMUNICATION CONTRIBUTED EXAMPLE:
GOVERNMENT ESERVICE PLATFORM**

Respondent: Top Level

Initiative	Government eService Platform
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Actor	This initiative was undertaken by the Ministry of Transport and Communication, in partnership with Microsoft Qatar, to be offered to the rest of Government entities (beneficiaries).
Place	The initiative was led by the central CIO office, under the Ministry of Transport and Communication. To offer the service to the big scale of government-wide. Built as a shared service (PaaS).
Timeline	Planning: 08/2016 – 10/2016 (2 Months) Decision: 10/2016 – 11/2016 (1 Month) Implementation: 11/2017 – 03/2017 (5 months)
Motivation	The Platform was built as part of infrastructure and technology readiness of the entities, to speed up the implementation of online services, reduce efforts and costs. and faster time to market of online services. The Platform included all the technological capabilities required to develop online services, from presentation, workflow, form server, integrated with national authentication, payment gateways, and the data exchange platform to integrate with the data required. With that the implementation of online/electronic services became much easier and faster. Having a central, PaaS Platform.
Aims	To improve ways of work, i.e. to make some things even better
Achievements	Easy way of implementation, build on best security and architectural practices. With central support and reporting capabilities.

**1.27. HASHEMITE KINGDOM OF JORDAN HIGHER COUNCIL FOR SCIENCE & TECHNOLOGY
CONTRIBUTED EXAMPLE: UNIVERSITY OF JORDAN INNOVATION AND ENTREPRENEURSHIP
CENTER (UJIEC)**

Respondent: Top Level

Initiative	University of Jordan Innovation and Entrepreneurship Center (UJIEC).
Actor	University of Jordan.
Place	In Amman Jordan, whole Kingdom, Aqaba
Timeline	Planning: NA Decision: NA Implementation: 10/2016 - Ongoing
Motivation	UJIEC offers entrepreneurs and innovators from the University and across the Kingdom the following services: Pre-incubation services. Start-up funding. Mentorship services. Entrepreneurship training and education. Patent registration support services. Networking.

Aims	To improve ways of work, i.e. to make some things even better To meet new needs, that did not exist before
Achievements	Total number of participants in training courses: 1250+ Number of networking events: 50 Total number of participants in events: 3000+ Number of competitions held by UJIEC: 4 Total number of participating projects in competitions : 73 Number of supported projects: 10

**1.28. HASHEMITE KINGDOM OF JORDAN MINISTRY OF INFORMATION AND COMMUNICATION
TECHNOLOGY CONTRIBUTED EXAMPLE: E-SERVICES CUSTOMERS JOURNEY STANDARDS**

Respondent: Middle to Top Level

Initiative	E-Services Customers Journey Standards
Actor	E-Government program at MoICT.
Place	All Government Entities at Hashemite Kingdom of Jordan
Timeline	Planning: 12/2016 (1 Month) Decision: 01/2017 – 01/2017 (1 months) Implementation: 04/2017 – 04/2017 (1 month)
Motivation	Government Entities were launching e-services giving the technical part a priority without giving Customer Journey which is an important component the needed weight. Some e-services were launched with usage difficulties as these components affect the whole e-services uptake taking into consideration some other factors. All Government Entities should comply with these standards in order to ensure easy, time-saving e-services.
Aims	To solve problems, i.e. to rectify things that were wrong To improve ways of work, i.e. to make some things even better To meet new needs, that did not exist before To comply with some broader policies or strategies
Achievements	Enhancing the usability and accessibility standards for all e-services in all Government Entities unifying Customer Journey Standards among all Government Entities.

**1.29. HASHEMITE KINGDOM OF JORDAN MINISTRY OF INFORMATION AND COMMUNICATION
TECHNOLOGY CONTRIBUTED EXAMPLE: DIGITIZING THE GOVERNMENT OF JORDAN 7x7x7
STRATEGY**

Respondent: Middle to Top Level

Initiative	Digitizing the Government of Jordan” (also known as 7x7x7) Strategy
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Actor	The “Digitizing the Government of Jordan” (also known as 7x7x7) Strategy has been endorsed by His Majesty, King Abdullah II and the Cabinet, has set the wheels in motion for this ambitious undertaking that will be the flagship of the Public Sector Reform in Jordan. The strategy will build on previous methodologies such as Re-engineer, Digitize and Outsource (ReDO) as well as on Value Chains.
Place	The Strategy includes the following entities: <ul style="list-style-type: none"> - Ministry of Finance, including: Department of Land and Survey (DLS) and Jordan Customs (JC). - Ministry of Interior, including Civil Status and Passport Department (CSPD) and Driver and Vehicle Licensing Department (DVLD). - Ministry of Justice. - Ministry of Health, including Medical Insurance Department (MID). - Investment Commission. - Ministry of Industry and Trade, including Company Control Department (CCD). - Greater Amman Municipality (GAM).
Timeline	Planning: 01/2017 – 04/2017 (4 months) Decision: 05/2017 – 05/2017 (1 months) Implementation: 06/2017 – 2020
Motivation	Improved service delivery to citizens. Public sector reform, transparency and reducing the corruption in Jordan. Enhance government efficiency and performance. Increase the participation of the private sector.
Aims	To solve problems, i.e. to rectify things that were wrong To improve ways of work, i.e. to make some things even better
Achievements	The preliminary results from implementing the 7x7x7 strategy will be obtained from the beginning of next year 2018, as there are 10 government services that will be provided to citizens only electronically.

VI. ANNEX 2: TIME MATURITY AND SDG AFFERENCE CHARACTERISTICS OF NATIVE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED

A. TIME MATURITY CHARACTERISTICS OF NATIVE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED

1 | country^[2]: Sultanate of Oman | organization: Ministry of Health | effort title: Family Care Unit | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3327> | launch date^[4]: 2002 | completion date^[5]: ongoing | launch year^[6]: 2002 | completion year^[6]: 2017 | launch age^[6]: 15 | completion age^[6]: 0 | fresh maturity^[6]: 10.5

2 | country^[2]: Kingdom of Morocco | organization: Ministry of Health | effort title: RAMED Medical Assistance Plan | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3890> | launch date^[4]: 2002 | completion date^[5]: ongoing | launch year^[6]: 2002 | completion year^[6]: 2017 | launch age^[6]: 15 | completion age^[6]: 0 | fresh maturity^[6]: 10.5

3 | country^[2]: Hashemite Kingdom of Jordan | organization: Higher Council for Science & Technology | effort title: Queen Rania Center for Entrepreneurship | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2004 | completion date^[5]: ongoing | launch year^[6]: 2004 | completion year^[6]: 2017 | launch age^[6]: 13 | completion age^[6]: 0 | fresh maturity^[6]: 9.5

4 | country^[2]: Kingdom of Bahrain | organization: Ministry of Education | effort title: Center of Excellence for Technical and Vocational Education | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3422> | launch date^[4]: 2005 | completion date^[5]: ongoing | launch year^[6]: 2005 | completion year^[6]: 2017 | launch age^[6]: 12 | completion age^[6]: 0 | fresh maturity^[6]: 9.0

5 | country^[2]: Kingdom of Bahrain | organization: Bahrain Economic Development Board | effort title: Establishing the Labor Fund (Tamkeen) Initiative | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3904> | launch date^[4]: 2006 | completion date^[5]: ongoing | launch year^[6]: 2006 | completion year^[6]: 2017 | launch age^[6]: 11 | completion age^[6]: 0 | fresh maturity^[6]: 8.5

6 | country^[2]: Lebanese Republic | organization: Institut des Finances Basil Fuleihan | effort title: GIFT-MENA | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3607> | launch date^[4]: 2006/03 | completion date^[5]: ongoing | launch year^[6]: 2006 | completion year^[6]: 2017 | launch age^[6]: 11 | completion age^[6]: 0 | fresh maturity^[6]: 8.5

7 | country^[2]: Sultanate of Oman | organization: Research Council | effort title: Innovation Park Muscat | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2006 | completion date^[5]: ongoing | launch year^[6]: 2006 | completion year^[6]: 2017 | launch age^[6]: 11 | completion age^[6]: 0 | fresh maturity^[6]: 8.5

8 | country^[2]: Kingdom of Morocco | organization: National Fund of Social Care Organizations (CNOPS) | effort title: Multichannel Home National Social Insurance Scheme | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3825> | launch date^[4]: 2006 | completion date^[5]: ongoing | launch year^[6]: 2006 | completion year^[6]: 2017 | launch age^[6]: 11 | completion age^[6]: 0 | fresh maturity^[6]: 8.5

9 | country^[2]: State of Kuwait | organization: Ministry of Health in collaboration with Forsyth Institute | effort title: School Oral Health Program | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/2747> | launch date^[4]: 2006 | completion date^[5]: ongoing | launch year^[6]: 2006 | completion year^[6]: 2017 | launch age^[6]: 11 | completion age^[6]: 0 | fresh maturity^[6]: 8.5

10 | country^[2]: Kingdom of Bahrain | organization: Ministry of Education | effort title: Secondary Vocational Education Project (SVEP) | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3424> | launch date^[4]: 2006 | completion date^[5]: ongoing | launch year^[6]: 2006 | completion year^[6]: 2017 | launch age^[6]: 11 | completion age^[6]: 0 | fresh maturity^[6]: 8.5

11 | country^[2]: Kingdom of Bahrain | organization: Ministry of Social Development and Ministry of Health | effort title: Child Protection Center | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/2917> | launch date^[4]: 2007 | completion date^[5]: ongoing | launch year^[6]: 2007 | completion year^[6]: 2017 | launch age^[6]: 10 | completion age^[6]: 0 | fresh maturity^[6]: 8.0

12 | country^[2]: Kingdom of Bahrain | organization: National Authority for Qualifications & Quality Assurance of Education and Training | effort title: Vocational Provider Improvement Strategy (VPIS) | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3427> | launch date^[4]: 2008 | completion date^[5]: 2014 | launch year^[6]: 2008 | completion year^[6]: 2014 | launch age^[6]: 9 | completion age^[6]: 3 | fresh maturity^[6]: 4.5

13 | country^[2]: Kingdom of Bahrain | organization: Information & e-Government Authority | effort title: Silah Gulf (National Contact Center) | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2008 | completion date^[5]: ongoing | launch year^[6]: 2008 | completion year^[6]: 2017 | launch age^[6]: 9 | completion age^[6]: 0 | fresh maturity^[6]: 7.5

14 | country^[2]: Kingdom of Bahrain | organization: Information & e-Government Authority | effort title: Sijilat (Business Licensing System) | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2009/06 | completion date^[5]: 2015/05 | launch year^[6]: 2009 | completion year^[6]: 2015 | launch age^[6]: 8 | completion age^[6]: 2 | fresh maturity^[6]: 5.0

15 | country^[2]: United Arab Emirates | organization: Emirates Identity Authority | effort title: Emirates ID Business Process Re-Engineering Initiative | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3660> | launch date^[4]: 2009 | completion date^[5]: ongoing | launch year^[6]: 2009 | completion year^[6]: 2017 | launch age^[6]: 8 | completion age^[6]: 0 | fresh maturity^[6]: 7.0

16 | country^[2]: Kingdom of Morocco | organization: Information Systems Directorate | effort title: Agricultural Aid and Subsidy System (SABA) | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3024> | launch date^[4]: 2010/03 | completion date^[5]: ongoing | launch year^[6]: 2010 | completion year^[6]: 2017 | launch age^[6]: 7 | completion age^[6]: 0 | fresh maturity^[6]: 6.5

17 | country^[2]: Sultanate of Oman | organization: Royal Oman Police | effort title: Road Safety Initiatives | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/2400> | launch date^[4]: 2010/10 | completion date^[5]: ongoing | launch year^[6]: 2010 | completion year^[6]: 2017 | launch age^[6]: 7 | completion age^[6]: 0 | fresh maturity^[6]: 6.5

18 | country^[2]: Arab Republic of Egypt | organization: Ministry of Communications and Information Technology | effort title: Technology Innovation and Entrepreneurship Centre (TIEC) | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2010/04 | completion date^[5]: ongoing | launch year^[6]: 2010 | completion year^[6]: 2017 | launch age^[6]: 7 | completion age^[6]: 0 | fresh maturity^[6]: 6.5

19 | country^[2]: Kingdom of Bahrain | organization: Ministry of Youth and Sport Affairs | effort title: Youth City 2030 | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3921> | launch date^[4]: 2010 | completion date^[5]: ongoing | launch year^[6]: 2010 | completion year^[6]: 2017 | launch age^[6]: 7 | completion age^[6]: 0 | fresh maturity^[6]: 6.5

20 | country^[2]: Kingdom of Bahrain | organization: Supreme Council for Women | effort title: National Model for the Integration of Women's Needs in Development (2014-2016) | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3483> | launch date^[4]: 2001 | completion date^[5]: 2016 | launch year^[6]: 2011 | completion year^[6]: 2016 | launch age^[6]: 6 | completion age^[6]: 1 | fresh maturity^[6]: 5.0

21 | country^[2]: Kingdom of Saudi Arabia | organization: King Faisal Specialist Hospital & Research Center | effort title: Automation of the identification of Child Abuse Cases | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3169> | launch date^[4]: 2011/12 | completion date^[5]: ongoing | launch year^[6]: 2011 | completion year^[6]: 2017 | launch age^[6]: 6 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

22 | country^[2]: Sultanate of Oman | organization: Information Technology Authority | effort title: Baladiyeti Mobile Application | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2011 | completion date^[5]: ongoing | launch year^[6]: 2011 | completion year^[6]: 2017 | launch age^[6]: 6 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

23 | country^[2]: Sultanate of Oman | organization: Public Authority for Consumer Protection | effort title: Consumer Rights Protection Initiative | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3323> | launch date^[4]: 2011/04 | completion date^[5]: ongoing | launch year^[6]: 2011 | completion year^[6]: 2017 | launch age^[6]: 6 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

24 | country^[2]: Arab Republic of Egypt | organization: Ministry of State for Administrative Development | effort title: Egyptian Women's Citizenship Initiative | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/2958> | launch date^[4]: 2011/11 | completion date^[5]: ongoing | launch year^[6]: 2011 | completion year^[6]: 2017 | launch age^[6]: 6 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

25 | country^[2]: State of Kuwait | organization: Public Authority for Civil Information | effort title: PACI GIS | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3326> | launch date^[4]: 2011 | completion date^[5]: ongoing | launch year^[6]: 2011 | completion year^[6]: 2017 | launch age^[6]: 6 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

26 | country^[2]: State of Palestine | organization: Ministry of Finance in collaboration with Expertise France | effort title: Palestine Public Finance Institute | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/5165> | launch date^[4]: 2011 | completion date^[5]: ongoing | launch year^[6]: 2011 | completion year^[6]: 2017 | launch age^[6]: 6 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

27 | country^[2]: Hashemite Kingdom of Jordan | organization: Higher Council for Science & Technology | effort title: The National Innovation Strategy 2013-2017 | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2011 | completion date^[5]: 2017 | launch year^[6]: 2011 | completion year^[6]: 2017 | launch age^[6]: 6 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

28 | country^[2]: Kingdom of Morocco | organization: Ministry of Public Service and Modernization of the Administration | effort title: Transparency of the Access System in the Moroccan Public Service / TranSA-FP | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/5231> | launch date^[4]: 2011/07 | completion date^[5]: ongoing | launch year^[6]: 2011 | completion year^[6]: 2017 | launch age^[6]: 6 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

29 | country^[2]: Republic of Tunisia | organization: Independent Higher Authority for Elections | effort title: Unstructured Supplementary Service Data (USSD) Application | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3745> | launch date^[4]: 2011/04 (est) | completion date^[5]: ongoing | launch year^[6]: 2011 | completion year^[6]: 2017 | launch age^[6]: 6 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

30 | country^[2]: Hashemite Kingdom of Jordan | organization: Higher Council for Science & Technology | effort title: Center of Excellence for Innovative Projects | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2012 | completion date^[5]: ongoing | launch year^[6]: 2012 | completion year^[6]: 2017 | launch age^[6]: 5 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

31 | country^[2]: Hashemite Kingdom of Jordan | organization: Social Security Corporation | effort title: Green Building Practices: Implementing Photovoltaic Cells Pilot Project and Photocells | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2012 | completion date^[5]: ongoing | launch year^[6]: 2012 | completion year^[6]: 2017 | launch age^[6]: 5 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

32 | country^[2]: Kingdom of Bahrain | organization: Ministry of Health | effort title: Multidisciplinary team for management of patients with HIV | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/5154> | launch date^[4]: 2012/01 | completion date^[5]: ongoing | launch year^[6]: 2012 | completion year^[6]: 2017 | launch age^[6]: 5 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

33 | country^[2]: Sultanate of Oman | organization: Supreme Council for Planning | effort title: National Planning and Decision Making Through Citizen Counseling | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3324> | launch date^[4]: 2012 | completion date^[5]: ongoing | launch year^[6]: 2012 | completion year^[6]: 2017 | launch age^[6]: 5 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

34 | country^[2]: Kingdom of Bahrain | organization: Ministry of Health | effort title: Novel discharge planning project for in-patients in major secondary care hospitals | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3403> | launch date^[4]: 2012/10 | completion date^[5]: ongoing | launch year^[6]: 2012 | completion year^[6]: 2017 | launch age^[6]: 5 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

35 | country^[2]: Kingdom of Saudi Arabia | organization: Human Resources Development Fund | effort title: Tawafuq Program | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/4962> | launch date^[4]: 2012/04 | completion date^[5]: ongoing | launch year^[6]: 2012 | completion year^[6]: 2017 | launch age^[6]: 5 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

36 | country^[2]: United Arab Emirates | organization: Abu Dhabi Judicial Department in collaboration with the World Bank and Thomson Reuters Corporation | effort title: Transparency of Laws Initiative | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3615> | launch date^[4]: 2012 | completion date^[5]: ongoing | launch year^[6]: 2012 | completion year^[6]: 2017 | launch age^[6]: 5 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

37 | country^[2]: Hashemite Kingdom of Jordan | organization: Social Security Corporation | effort title: Utilize Social Media in Media Centre Campaigns | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2012 | completion date^[5]: ongoing | launch year^[6]: 2012 | completion year^[6]: 2017 | launch age^[6]: 5 | completion age^[6]: 0 | fresh maturity^[6]: 6.0

38 | country^[2]: Sultanate of Oman | organization: Information Technology Authority | effort title: eClearance System | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2013/10 | completion date^[5]: ongoing | launch year^[6]: 2013 | completion year^[6]: 2017 | launch age^[6]: 4 | completion age^[6]: 0 | fresh maturity^[6]: 5.0

39 | country^[2]: Kingdom of Saudi Arabia | organization: King Abdullah bin Abdul-Aziz Foundation for International Humanitarian Activities | effort title: Hemodialysis Center | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3911> | launch date^[4]: 2013/08 | completion

date^[5]: ongoing | launch year^[6]: 2013 | completion year^[6]: 2017 | launch age^[6]: 4 | completion age^[6]: 0 | fresh maturity^[6]: 5.0

40 | country^[2]: Kingdom of Bahrain | organization: Ministry of Social Development | effort title: Improving the Financial Support Program | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3435> | launch date^[4]: 2013/04 | completion date^[5]: ongoing | launch year^[6]: 2013 | completion year^[6]: 2017 | launch age^[6]: 4 | completion age^[6]: 0 | fresh maturity^[6]: 5.0

41 | country^[2]: Kingdom of Saudi Arabia | organization: Ministry of Housing | effort title: KSA Housing Program | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3644> | launch date^[4]: 2013/07 | completion date^[5]: ongoing | launch year^[6]: 2013 | completion year^[6]: 2017 | launch age^[6]: 4 | completion age^[6]: 0 | fresh maturity^[6]: 5.0

42 | country^[2]: Hashemite Kingdom of Jordan | organization: Higher Council for Science & Technology | effort title: National Center for Innovation | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2013 | completion date^[5]: ongoing | launch year^[6]: 2013 | completion year^[6]: 2017 | launch age^[6]: 4 | completion age^[6]: 0 | fresh maturity^[6]: 5.0

43 | country^[2]: Kingdom of Morocco | organization: Ministry Responsible for Moroccans Resident Abroad and Migration Affairs | effort title: National Immigration and Asylum Policy | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/4915> | launch date^[4]: 2013/09 | completion date^[5]: ongoing | launch year^[6]: 2013 | completion year^[6]: 2017 | launch age^[6]: 4 | completion age^[6]: 0 | fresh maturity^[6]: 5.0

44 | country^[2]: Kingdom of Morocco | organization: National Agency for the Promotion of Employment and Skills | effort title: Support for Female Entrepreneurship | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3932> | launch date^[4]: 2013 | completion date^[5]: ongoing | launch year^[6]: 2013 | completion year^[6]: 2017 | launch age^[6]: 4 | completion age^[6]: 0 | fresh maturity^[6]: 5.0

45 | country^[2]: Sultanate of Oman | organization: Ministry of Manpower | effort title: Wage Protection System (WPS) | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3270> | launch date^[4]: 2013/01 | completion date^[5]: ongoing | launch year^[6]: 2013 | completion year^[6]: 2017 | launch age^[6]: 4 | completion age^[6]: 0 | fresh maturity^[6]: 5.0

46 | country^[2]: Sultanate of Oman | organization: Information Technology Authority | effort title: Invest Easy Initiative | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2014/04 | completion date^[5]: 2016/07 | launch year^[6]: 2014 | completion year^[6]: 2016 | launch age^[6]: 3 | completion age^[6]: 1 | fresh maturity^[6]: 3.0

47 | country^[2]: United Arab Emirates | organization: Abu Dhabi Housing Authority | effort title: Abu Dhabi Social Housing Policies and Programs | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/5214> | launch date^[4]: 2014 (est) | completion

date^[5]: ongoing | launch year^[6]: 2014 | completion year^[6]: 2017 | launch age^[6]: 3 | completion age^[6]: 0 | fresh maturity^[6]: 4.0

48 | country^[2]: Hashemite Kingdom of Jordan | organization: Social Security Corporation | effort title: Develop Business Audit Division | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2014/05 | completion date^[5]: ongoing | launch year^[6]: 2014 | completion year^[6]: 2017 | launch age^[6]: 3 | completion age^[6]: 0 | fresh maturity^[6]: 4.0

49 | country^[2]: Arab Republic of Egypt | organization: Cabinet of Ministries | effort title: Establish Egypt National Grid Reference | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2014/01 | completion date^[5]: ongoing | launch year^[6]: 2014 | completion year^[6]: 2017 | launch age^[6]: 3 | completion age^[6]: 0 | fresh maturity^[6]: 4.0

50 | country^[2]: Hashemite Kingdom of Jordan | organization: Ministry of Public Sector Development | effort title: Innovation Incubator | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2014/06 | completion date^[5]: ongoing | launch year^[6]: 2014 | completion year^[6]: 2017 | launch age^[6]: 3 | completion age^[6]: 0 | fresh maturity^[6]: 4.0

51 | country^[2]: Hashemite Kingdom of Jordan | organization: King Hussein Cancer Foundation | effort title: Jordan Breast Cancer Program Mobile Mammography Unit Screening Project | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/2415> | launch date^[4]: 2014 | completion date^[5]: ongoing | launch year^[6]: 2014 | completion year^[6]: 2017 | launch age^[6]: 3 | completion age^[6]: 0 | fresh maturity^[6]: 4.0

52 | country^[2]: Hashemite Kingdom of Jordan | organization: Ministry of Planning and International Cooperation | effort title: Jordan's Response to Mitigate the Impact of Syria Crisis on Jordan | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2014 | completion date^[5]: ongoing | launch year^[6]: 2014 | completion year^[6]: 2017 | launch age^[6]: 3 | completion age^[6]: 0 | fresh maturity^[6]: 4.0

53 | country^[2]: Hashemite Kingdom of Jordan | organization: Higher Council for Science & Technology | effort title: Support to Research, Technological Development and Innovation in Jordan | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2014/02 | completion date^[5]: 2017/02 | launch year^[6]: 2014 | completion year^[6]: 2017 | launch age^[6]: 3 | completion age^[6]: 0 | fresh maturity^[6]: 4.0

54 | country^[2]: Hashemite Kingdom of Jordan | organization: Ministry of Information and Communication Technology | effort title: Establishment of a Government Account on Apple and Google Stores | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2015/08 | completion date^[5]: 2016/09 | launch year^[6]: 2015 | completion year^[6]: 2016 | launch age^[6]: 2 | completion age^[6]: 1 | fresh maturity^[6]: 2.0

55 | country^[2]: Kingdom of Bahrain | organization: Information & e-Government Authority | effort title: Fix2Go | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2015/12 | completion date^[5]: 2016/04 | launch year^[6]: 2015 | completion year^[6]: 2016 | launch age^[6]: 2 | completion age^[6]: 1 | fresh maturity^[6]: 2.0

56 | country^[2]: Hashemite Kingdom of Jordan | organization: Social Security Corporation | effort title: Applying International Social Security Association (ISSA) Guidelines | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2015 | completion date^[5]: ongoing | launch year^[6]: 2015 | completion year^[6]: 2017 | launch age^[6]: 2 | completion age^[6]: 0 | fresh maturity^[6]: 3.0

57 | country^[2]: State of Palestine | organization: Ministry of Telecom & IT | effort title: Governmental Mobile Applications Competition | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2015/12 | completion date^[5]: 2017/07 | launch year^[6]: 2015 | completion year^[6]: 2017 | launch age^[6]: 2 | completion age^[6]: 0 | fresh maturity^[6]: 3.0

58 | country^[2]: Hashemite Kingdom of Jordan | organization: Ministry of Planning and International Cooperation | effort title: Information System for Jordan Response Platform for Syria Crisis (JORISS) | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2015 | completion date^[5]: ongoing | launch year^[6]: 2015 | completion year^[6]: 2017 | launch age^[6]: 2 | completion age^[6]: 0 | fresh maturity^[6]: 3.0

59 | country^[2]: Hashemite Kingdom of Jordan | organization: Ministry of Information and Communication Technology | effort title: Open Government Data Policy | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2015 | completion date^[5]: ongoing | launch year^[6]: 2015 | completion year^[6]: 2017 | launch age^[6]: 2 | completion age^[6]: 0 | fresh maturity^[6]: 3.0

60 | country^[2]: Kingdom of Saudi Arabia | organization: General Organization for Social Insurance | effort title: Proactive Registration of Non-Saudis | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3205> | launch date^[4]: 2015 (est) | completion date^[5]: ongoing | launch year^[6]: 2015 | completion year^[6]: 2017 | launch age^[6]: 2 | completion age^[6]: 0 | fresh maturity^[6]: 3.0

61 | country^[2]: State of Kuwait | organization: Ministry of Finance | effort title: Tasdeed | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3347> | launch date^[4]: 2015 | completion date^[5]: ongoing | launch year^[6]: 2015 | completion year^[6]: 2017 | launch age^[6]: 2 | completion age^[6]: 0 | fresh maturity^[6]: 3.0

62 | country^[2]: Kingdom of Saudi Arabia | organization: King Faisal Specialist Hospital & Research Center | effort title: Tele-Intensive Care Unit (Tele-ICU) | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3158> | launch date^[4]: 2015 | completion date^[5]: ongoing | launch year^[6]: 2015 | completion year^[6]: 2017 | launch age^[6]: 2 | completion age^[6]: 0 | fresh maturity^[6]: 3.0

63 | country^[2]: Hashemite Kingdom of Jordan | organization: Ministry of Information and Communication Technology | effort title: E-Services Customers Journey Standards | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2016/12 | completion date^[5]: 2017/04 | launch year^[6]: 2016 | completion year^[6]: 2017 | launch age^[6]: 1 | completion age^[6]: 0 | fresh maturity^[6]: 2.0

64 | country^[2]: State of Qatar | organization: Ministry of Transport and Communication | effort title: Government eService Platform | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2016/08 | completion date^[5]: 2017/03 | launch year^[6]: 2016 | completion year^[6]: 2017 | launch age^[6]: 1 | completion age^[6]: 0 | fresh maturity^[6]: 2.0

65 | country^[2]: Sultanate of Oman | organization: Information Technology Authority | effort title: Parent Mobile Application | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2016/01 | completion date^[5]: ongoing | launch year^[6]: 2016 | completion year^[6]: 2017 | launch age^[6]: 1 | completion age^[6]: 0 | fresh maturity^[6]: 2.0

66 | country^[2]: Hashemite Kingdom of Jordan | organization: Higher Council for Science & Technology | effort title: University of Jordan Innovation and Entrepreneurship Centre (UJIEC) | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2016/10 | completion date^[5]: ongoing | launch year^[6]: 2016 | completion year^[6]: 2017 | launch age^[6]: 1 | completion age^[6]: 0 | fresh maturity^[6]: 2.0

67 | country^[2]: Kingdom of Bahrain | organization: Ministry of Interior | effort title: Anti-Violence & Addiction Program | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/3905> | launch date^[4]: 2017 (est) | completion date^[5]: ongoing | launch year^[6]: 2017 | completion year^[6]: 2017 | launch age^[6]: 0 | completion age^[6]: 0 | fresh maturity^[6]: 1.0

68 | country^[2]: Hashemite Kingdom of Jordan | organization: Ministry of Information and Communication Technology | effort title: Digitizing the Government of Jordan 7x7x7 Strategy | information source^[3]: UN ESCWA Member Countries responses to questionnaire on examples of public sector innovation efforts | launch date^[4]: 2017/01 | completion date^[5]: ongoing | launch year^[6]: 2017 | completion year^[6]: 2017 | launch age^[6]: 0 | completion age^[6]: 0 | fresh maturity^[6]: 1.0

69 | country^[2]: Kingdom of Saudi Arabia | organization: Communication Information Technology Commission (CITC) | effort title: Universal Service Fund | information source^[3]: Knowledge Base of UN Public Service Awards Initiatives^[8], case description webpage: <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases/ctl/NominationProfilev2014/mid/1170/id/5409> | launch date^[4]: 2017 (est) | completion date^[5]: ongoing | launch year^[6]: 2017 | completion year^[6]: 2017 | launch age^[6]: 0 | completion age^[6]: 0 | fresh maturity^[6]: 1.0

B. NATIVE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED WITH AFFERENCE TO SDG3. GOOD HEALTH AND WELL-BEING

1 | country^[2]: Sultanate of Oman | organization: Ministry of Health | effort title: Family Care Unit

2 | country^[2]: Kingdom of Morocco | organization: Ministry of Health | effort title: RAMED Medical Assistance Plan

8 | country^[2]: Kingdom of Morocco | organization: National Fund of Social Care Organizations (CNOPS) | effort title: Multichannel Home National Social Insurance Scheme

9 | country^[2]: State of Kuwait | organization: Ministry of Health in collaboration with Forsyth Institute | effort title: School Oral Health Program

11 | country^[2]: Kingdom of Bahrain | organization: Ministry of Social Development and Ministry of Health | effort title: Child Protection Center

17 | country^[2]: Sultanate of Oman | organization: Royal Oman Police | effort title: Road Safety Initiatives

21 | country^[2]: Kingdom of Saudi Arabia | organization: King Faisal Specialist Hospital & Research Center | effort title: Automation of the identification of Child Abuse Cases

32 | country^[2]: Kingdom of Bahrain | organization: Ministry of Health | effort title: Multidisciplinary team for management of patients with HIV

34 | country^[2]: Kingdom of Bahrain | organization: Ministry of Health | effort title: Novel discharge planning project for in-patients in major secondary care hospitals

39 | country^[2]: Kingdom of Saudi Arabia | organization: King Abdullah bin Abdul-Aziz Foundation for International Humanitarian Activities | effort title: Hemodialysis Center

51 | country^[2]: Hashemite Kingdom of Jordan | organization: King Hussein Cancer Foundation | effort title: Jordan Breast Cancer Program Mobile Mammography Unit Screening Project

56 | country^[2]: Hashemite Kingdom of Jordan | organization: Social Security Corporation | effort title: Applying International Social Security Association (ISSA) Guidelines

62 | country^[2]: Kingdom of Saudi Arabia | organization: King Faisal Specialist Hospital & Research Center | effort title: Tele-Intensive Care Unit (Tele-ICU)

67 | country^[2]: Kingdom of Bahrain | organization: Ministry of Interior | effort title: Anti-Violence & Addiction Program

C. NATIVE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED WITH AFFERENCE TO SDG4. QUALITY EDUCATION

4 | country^[2]: Kingdom of Bahrain | organization: Ministry of Education | effort title: Center of Excellence for Technical and Vocational Education

10 | country^[2]: Kingdom of Bahrain | organization: Ministry of Education | effort title: Secondary Vocational Education Project (SVEP)

12 | country^[2]: Kingdom of Bahrain | organization: National Authority for Qualifications & Quality Assurance of Education and Training | effort title: Vocational Provider Improvement Strategy (VPIS)

65 | country^[2]: Sultanate of Oman | organization: Information Technology Authority | effort title: Parent Mobile Application

D. NATIVE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED WITH AFFERENCE TO SDG5. GENDER EQUALITY

20 | country^[2]: Kingdom of Bahrain | organization: Supreme Council for Women | effort title: National Model for the Integration of Women's Needs in Development (2014-2016)

24 | country^[2]: Arab Republic of Egypt | organization: Ministry of State for Administrative Development | effort title: Egyptian Women's Citizenship Initiative

44 | country^[2]: Kingdom of Morocco | organization: National Agency for the Promotion of Employment and Skills | effort title: Support for Female Entrepreneurship

E. NATIVE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED WITH AFFERENCE TO SDG8. DECENT WORK AND ECONOMIC GROWTH

3 | country^[2]: Hashemite Kingdom of Jordan | organization: Higher Council for Science & Technology | effort title: Queen Rania Center for Entrepreneurship

5 | country^[2]: Kingdom of Bahrain | organization: Bahrain Economic Development Board | effort title: Establishing the Labor Fund (Tamkeen) Initiative

14 | country^[2]: Kingdom of Bahrain | organization: Information & e-Government Authority | effort title: Sijilat (Business Licensing System)

28 | country^[2]: Kingdom of Morocco | organization: Ministry of Public Service and Modernization of the Administration | effort title: Transparency of the Access System in the Moroccan Public Service / TranSA-FP

35 | country^[2]: Kingdom of Saudi Arabia | organization: Human Resources Development Fund | effort title: Tawafuq Program

38 | country^[2]: Sultanate of Oman | organization: Information Technology Authority | effort title: eClearance System

45 | country^[2]: Sultanate of Oman | organization: Ministry of Manpower | effort title: Wage Protection System (WPS)

46 | country^[2]: Sultanate of Oman | organization: Information Technology Authority | effort title: Invest Easy Initiative

48 | country^[2]: Hashemite Kingdom of Jordan | organization: Social Security Corporation | effort title: Develop Business Audit Division

60 | country^[2]: Kingdom of Saudi Arabia | organization: General Organization for Social Insurance | effort title: Proactive Registration of Non-Saudis

F. NATIVE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED WITH AFFERENCE TO SDG9. INDUSTRY, INNOVATION AND INFRASTRUCTURE

7 | country^[2]: Sultanate of Oman | organization: Research Council | effort title: Innovation Park Muscat

18 | country^[2]: Arab Republic of Egypt | organization: Ministry of Communications and Information Technology | effort title: Technology Innovation and Entrepreneurship Centre (TIEC)

19 | country^[2]: Kingdom of Bahrain | organization: Ministry of Youth and Sport Affairs | effort title: Youth City 2030

25 | country^[2]: State of Kuwait | organization: Public Authority for Civil Information | effort title: PACI GIS

27 | country^[2]: Hashemite Kingdom of Jordan | organization: Higher Council for Science & Technology | effort title: The National Innovation Strategy 2013-2017

30 | country^[2]: Hashemite Kingdom of Jordan | organization: Higher Council for Science & Technology | effort title: Center of Excellence for Innovative Projects

42 | country^[2]: Hashemite Kingdom of Jordan | organization: Higher Council for Science & Technology | effort title: National Center for Innovation

49 | country^[2]: Arab Republic of Egypt | organization: Cabinet of Ministries | effort title: Establish Egypt National Grid Reference

50 | country^[2]: Hashemite Kingdom of Jordan | organization: Ministry of Public Sector Development | effort title: Innovation Incubator

53 | country^[2]: Hashemite Kingdom of Jordan | organization: Higher Council for Science & Technology | effort title: Support to Research, Technological Development and Innovation in Jordan

57 | country^[2]: State of Palestine | organization: Ministry of Telecom & IT | effort title: Governmental Mobile Applications Competition

61 | country^[2]: State of Kuwait | organization: Ministry of Finance | effort title: Tasdeed

64 | country^[2]: State of Qatar | organization: Ministry of Transport and Communication | effort title: Government eService Platform

66 | country^[2]: Hashemite Kingdom of Jordan | organization: Higher Council for Science & Technology | effort title: University of Jordan Innovation and Entrepreneurship Centre (UJIEC)

G. NATIVE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED WITH AFFERENCE TO SDG10. REDUCED INEQUALITIES

13 | country^[2]: Kingdom of Bahrain | organization: Information & e-Government Authority | effort title: Silah Gulf (National Contact Center)

15 | country^[2]: United Arab Emirates | organization: Emirates Identity Authority | effort title: Emirates ID Business Process Re-Engineering Initiative

16 | country^[2]: Kingdom of Morocco | organization: Information Systems Directorate | effort title: Agricultural Aid and Subsidy System (SABA)

23 | country^[2]: Sultanate of Oman | organization: Public Authority for Consumer Protection | effort title: Consumer Rights Protection Initiative

37 | country^[2]: Hashemite Kingdom of Jordan | organization: Social Security Corporation | effort title: Utilize Social Media in Media Centre Campaigns

40 | country^[2]: Kingdom of Bahrain | organization: Ministry of Social Development | effort title: Improving the Financial Support Program

41 | country^[2]: Kingdom of Saudi Arabia | organization: Ministry of Housing | effort title: KSA Housing Program

47 | country^[2]: United Arab Emirates | organization: Abu Dhabi Housing Authority | effort title: Abu Dhabi Social Housing Policies and Programs

54 | country^[2]: Hashemite Kingdom of Jordan | organization: Ministry of Information and Communication Technology | effort title: Establishment of a Government Account on Apple and Google Stores

63 | country^[2]: Hashemite Kingdom of Jordan | organization: Ministry of Information and Communication Technology | effort title: E-Services Customers Journey Standards

68 | country^[2]: Hashemite Kingdom of Jordan | organization: Ministry of Information and Communication Technology | effort title: Digitizing the Government of Jordan 7x7x7 Strategy

69 | country^[2]: Kingdom of Saudi Arabia | organization: Communication Information Technology Commission (CITC) | effort title: Universal Service Fund

H. NATIVE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED WITH AFFERENCE TO SDG11.SUSTAINABLE CITIES AND COMMUNITIES

22 | country^[2]: Sultanate of Oman | organization: Information Technology Authority | effort title: Baladiyeti Mobile Application

55 | country^[2]: Kingdom of Bahrain | organization: Information & e-Government Authority | effort title: Fix2Go

I. NATIVE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED WITH AFFERENCE TO SDG13.CLIMATE ACTION

31 | country^[2]: Hashemite Kingdom of Jordan | organization: Social Security Corporation | effort title: Green Building Practices: Implementing Photovoltaic Cells Pilot Project and Photocells

J. NATIVE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED WITH AFFERENCE TO SDG16.PEACE, JUSTICE AND STRONG INSTITUTIONS

26 | country^[2]: State of Palestine | organization: Ministry of Finance in collaboration with Expertise France | effort title: Palestine Public Finance Institute

29 | country^[2]: Republic of Tunisia | organization: Independent Higher Authority for Elections | effort title: Unstructured Supplementary Service Data (USSD) Application

33 | country^[2]: Sultanate of Oman | organization: Supreme Council for Planning | effort title: National Planning and Decision Making Through Citizen Counseling

36 | country^[2]: United Arab Emirates | organization: Abu Dhabi Judicial Department in collaboration with the World Bank and Thomson Reuters Corporation | effort title: Transparency of Laws Initiative

43 | country^[2]: Kingdom of Morocco | organization: Ministry Responsible for Moroccans Resident Abroad and Migration Affairs | effort title: National Immigration and Asylum Policy

52 | country^[2]: Hashemite Kingdom of Jordan | organization: Ministry of Planning and International Cooperation | effort title: Jordan's Response to Mitigate the Impact of Syria Crisis on Jordan

58 | country^[2]: Hashemite Kingdom of Jordan | organization: Ministry of Planning and International Cooperation | effort title: Information System for Jordan Response Platform for Syria Crisis (JORISS)

K. NATIVE PUBLIC SECTOR INNOVATION EFFORTS SAMPLED WITH AFFERENCE TO SDG17.PARTNERSHIPS FOR THE GOALS

6 | country^[2]: Lebanese Republic | organization: Institut des Finances Basil Fuleihan | effort title: GIFT-MENA

59 | country^[2]: Hashemite Kingdom of Jordan | organization: Ministry of Information and Communication Technology | effort title: Open Government Data Policy

L. NOTES ON THE MEANING AND VALUATION OF CATALOGUED METADATA

^[1] entries sorted primarily on ascending launch year, then on ascending completion year, and then on ascending alphabetical order of effort title

^[2] as designated by the United Nations (information sourced from webpage <https://www.unescwa.org/about-escwa/overview/member-states>)

^[3] referring to the official or otherwise authentic information sources used to provide information about this innovation effort

^[4] in YYYY/MM or YYYY format, derived from the launch date of the earliest activity mentioned in the information provided from sources, or estimated from contextual information if not provided explicitly (cases marked "est")

^[5] in YYYY/MM or YYYY format, derived from the completion date of the latest activity mentioned in the information provided from sources, or mentioned as ongoing if not provided / not accomplished yet

^[6] defined and encoded/calculated according to the provisions of the IPTTM conceptual model for time maturity and process type characteristics of public sector innovation efforts; as far as process type characteristics are concerned, it should be kept in mind that more specific / more scarce values are assigned only upon the presence of specific relevant information provided by the corresponding sources, whereas in the absence of such information more generic / less scarce types are assigned

^[7] calculated for each innovation effort in a given sample of efforts as the sum of scarcity ratings with respect to the rest of the sample across all process type dimensions of the IPTTM conceptual model

^[8] online accessible at webpage <https://publicadministration.un.org/en/Research/Case-Studies/unpsacases>