

Applications of Behavioral Insights and Nudge to Policy Planning & Implementation

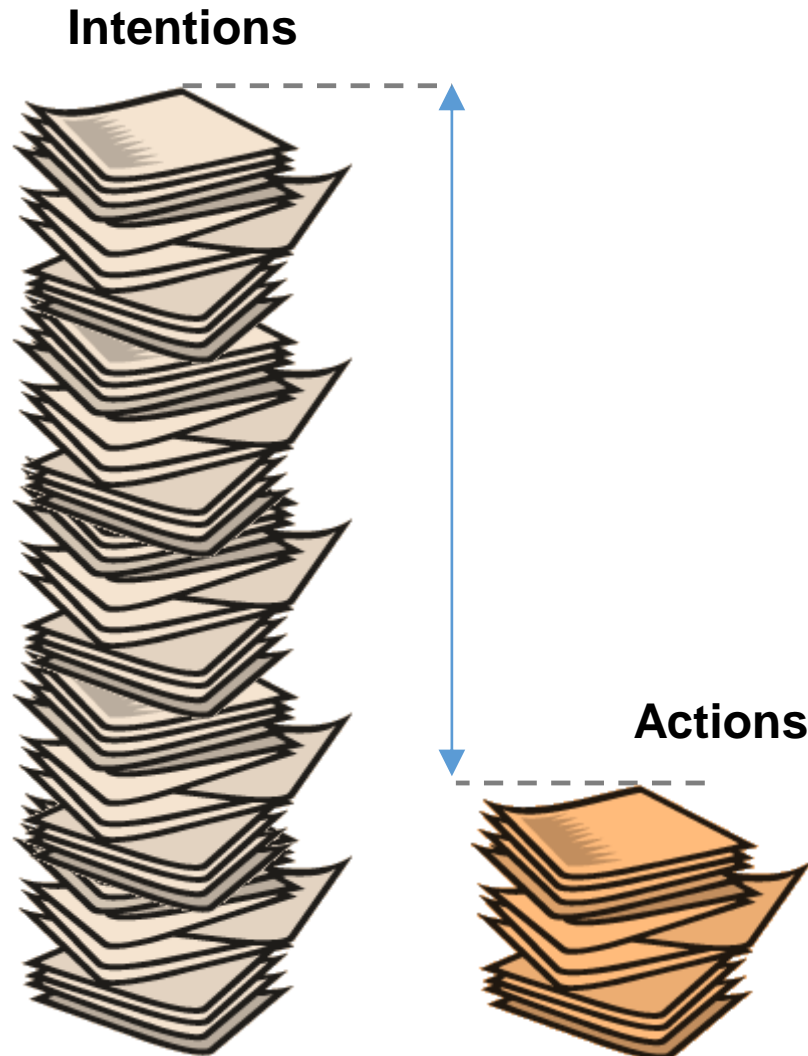
September 14, 2018

The purpose of today's presentation

- 1** Introduce the concept of “nudges” and behavioural insights
- 2** Discuss potential application to Strategic Planning

There is a wide gap between what we intend to do and what we actually end up doing ... *Intention-Action Gap*

- Exercising more
- Sticking to a diet
- Recycling your waste
- Saving for retirement
- Spending less time on Instagram
- Cleaning up the closet
- Quitting smoking
- Being more punctual
- Reading more books
- Learning a new language
- Starting a new hobby
- Going for health checkups regularly
- Backing up your computer
- Getting an insurance
- Etc.



We have biases that affect our decision making abilities and the extent to which we act in our own best interests ...

NON-EXHAUSTIVE

We overvalue immediate rewards at the expense of long-term ones –we have **Present bias and do hyperbolic discounting of the future**. We make decisions today that our future self would not have made!

We have a tendency to assess probability of some event by the ease with which such event comes to mind (**availability bias**)

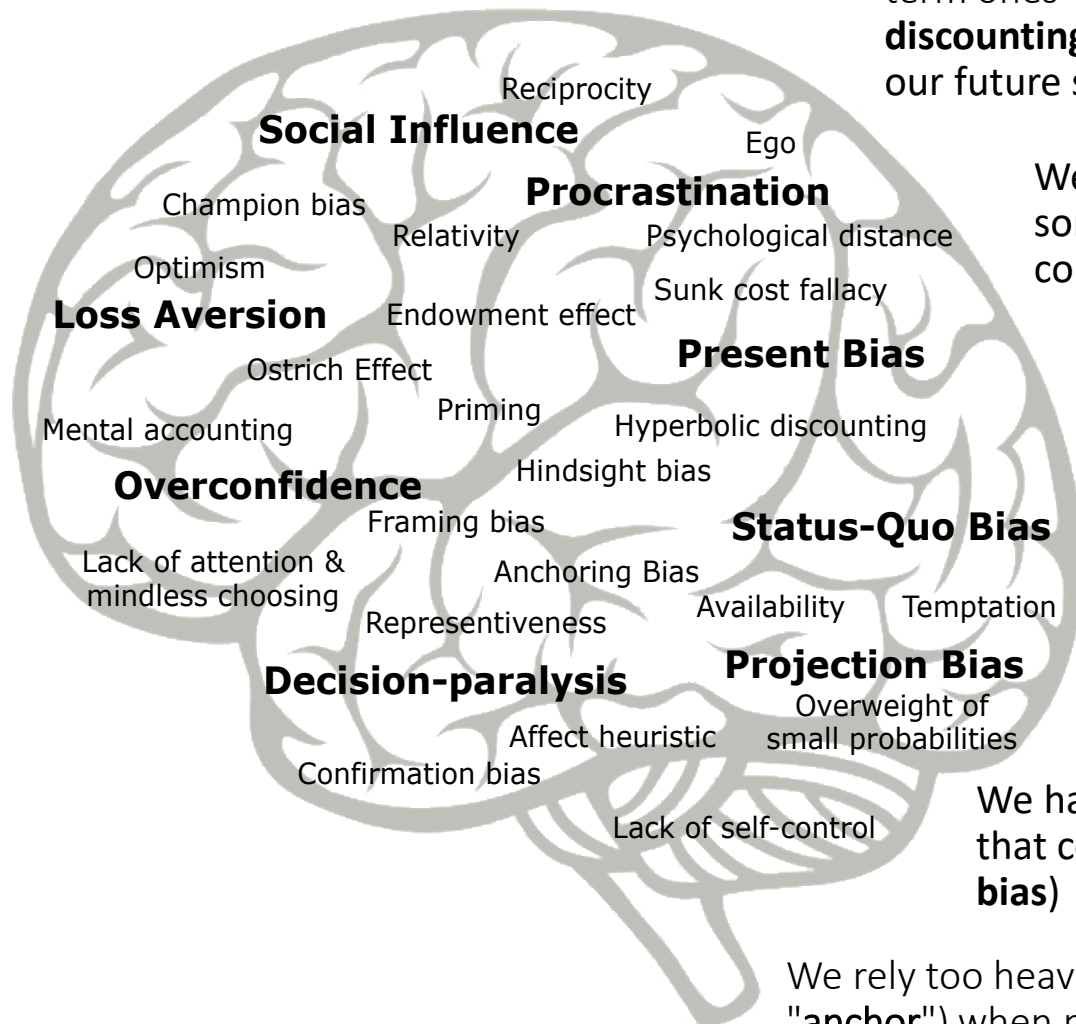
The pain experienced from losses is twice as much as the pleasure experienced from equivalent gains – we have **loss aversion**

We prefer to keeping things the way they are (**status quo bias**)

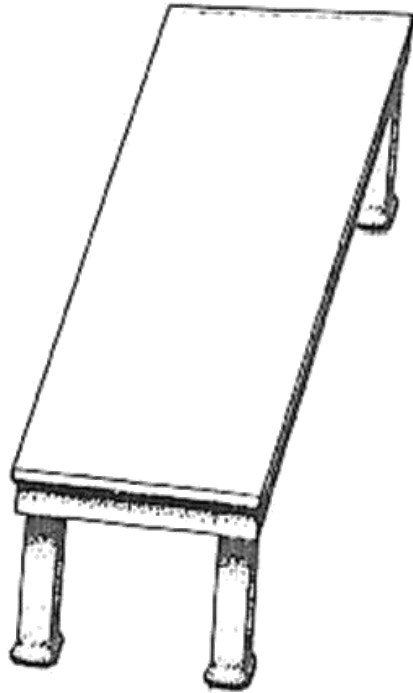
We overestimate our own abilities relative to others and are **overconfident**

We have a tendency to search for information that confirms our existing beliefs (**Confirmation bias**)

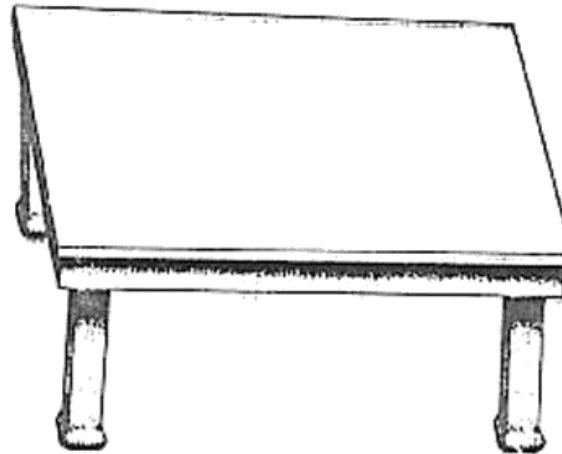
We rely too heavily on the first value offered (the "anchor") when making a judgment



Which table is longer and narrower?

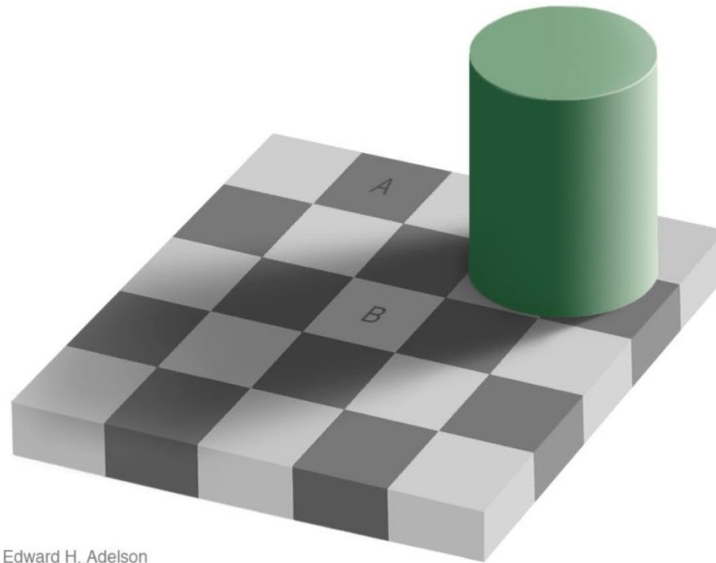


A



B

Which one of these two squares is darker?



A

B

Edward H. Adelson

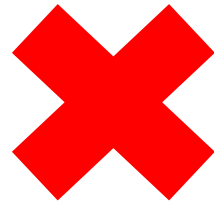
How much does the ball cost?

A bat and ball together \$1.10

If the bat costs \$1.00 more than the ball,
how much does the ball cost?



How much does the ball cost?



Ball costs **10 cents**

Bat costs 1\$ more = **1.1\$**

Total = **1.2\$**



Ball costs **5 cents**

Bat costs 1\$ more = **1.05\$**

Total = **1.1\$**

1. Biases and heuristics ... a few examples

Loss aversion

Class Exercise: How much are you willing to bid for \$20?

TWO RULES!

Rule number 1: bids must be made in \$1 increments.

Rule number 2: the runner-up must honor their bid. That is, although the winner will take the \$20 bill, the second place finisher too must pay the last bid he or she made, but receive nothing in return.



Answers?

Anchoring Bias Example 1

- **Kahneman & Tversky** asked a group of people to spin a wheel from 1 to 100
- Then they were asked to estimate the percentage of African Nationals in the UN
- **Results:**
 - People who spun a 10 estimated a 25% of African Nationals in the UN
 - People who spun a 65 estimated a 45% of African Nationals in the UN
- There was a direct correlation between how high the number they spun was and the percentage they estimate afterwards



Anchoring Bias Example 2

- In a 2001 study, criminal judges were given identical materials describing a hypothetical case of an alleged crime:
 - For half of the participants, the prosecutor demanded a prison sentence of **2 months** (Low Demand)
 - For the other half, the prosecutor demanded a sentence of **34 months** (High Demand)
- **Results:**
 - Given sentences were **higher** for participants who evaluated the **high sentencing demand** :
(**M = 28.70 months**, SD =6.53) than for participants who evaluated the **low sentencing demand**: (**M = 18.78 months**, SD = 9.11)
 - **Final sentences differed by as much as 10 months**

Anchoring

- “In many situations, people make estimates by starting from an initial value that is adjusted to yield the final answer [...] adjustments are typically insufficient”

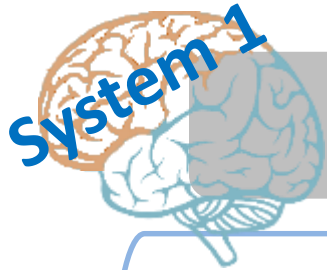
Kahneman and

Tversky, 1974

- In other words, we start with a value we know, called *anchor*, and adjust our views in the direction we judge appropriate, but this adjustment is insufficient
- Why? because we don't know how far to move away or when our mental resources are depleted



Nobel Prize Winner Daniel Kahneman: Two Systems in Judgement and Decision-Making



System 1
Fast



Automatic



Unconscious



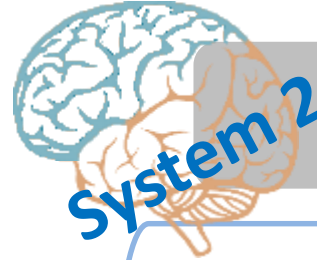
Emotional



Daily Decisions



Prone to Error



System 2
Slow



Deliberative



Complex Decision



Conscious



Effortful



Reliable



Lazy Controller

Behavioral economics is becoming mainstream economics

Conventional Economics

- For decades, classical economics assumed people's decisions and behaviors are based on deliberative thinking of system 2, and that people are infinitely rational – or 'Econs'
- When a given a set of facts, Econs process everything to make the most optimal decision
- Most policies are designed with rational people (Econs) in mind, whereas majority are humans and have biases ...
- The fact that the very fundamentals of economics are based on wrong assumptions puts in question the current models for policy making

Behavioral Economics

- BE which is a discipline of economics that applies psychological insights into human behavior to explain decisions
- It rejects the overly simplistic and sometimes naive assumptions of classical economics about human behavior, and proposes more realistic model on how people actually behave
- In particular, BE takes into consideration that people are imperfect and are prone to making mistakes
- ***The golden standard for BE is experimentation and Randomized Controlled Trials (RCTs) ...***

Instead, for policies to change people behavior we have been relying on two classical tools ...

Policy Making Levers to Influence People's Behavior

Command-and-Control Regulations

1

Classical tools

Rewards and Financial Incentives

one does not always work

...

the other one is not sustainable

Use of Nudging & Behavioral Insights

2



“any aspect of choice architecture that alters people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives”


R. Thaler & C. Sunstein

It seeks to counter biases and mental shortcuts that are generally the result of an automatic, fast and unconscious “System 1” in the human mind

So the key characteristics of “nudge” are Four

Key Characteristics of Nudge

- 1 *Small, architecture types of intervention: e.g., default rules, use of messenger, priming, reminders, feedback, salience*
- 2 *That steer people in the right direction, in a predictable way*
- 3 *They are cost effective, that is, it does not significantly alter the financial incentive structure: a subsidy is therefore not a nudge*
- 4 *They are choice preserving, they do not take away other options*



It seeks to counter biases and mental shortcuts that are generally the result of an automatic, fast and unconscious “System 1” in the human mind

The rise of nudge and behavioral insights application to public policies has been phenomenal, driven by 3 factors

1 State Limitations

- Limited enforcement power
- Austerity measures

2 Intellectual Capital on Behavioral Economics

- Writings of well-known behavioral scientists such as Thaler, Sunstein, Kahneman ... even older economists
- Recognition through Nobel Prizes

3 Rise of Nudge Units

- First nudge unit in the UK
- Several countries followed
- In the Middle East, this has started to happen

Behavioral Insights set ups exist in different forms, e.g. governmental, NGO, academic, or social purpose



Governmental Nudge Units

- Are either fully or partially owned by Government
- Have their priorities cascaded from governmental agenda
- Many focus on **improving public policy-making** and citizen's welfare, **using RCTs and nudges**
- Positioned either at the highest level of government with broad mandate, or housed in a sector-specific ministry with a more focused in their mandate



NGO BI Initiatives (Non-Academic)

- Non-academic centers have multiple legal structures: NGOs, NPO, foundations, ...
- **Some operate like Nudge units** in their focus on public policy experimentation in a non lab-controlled environment
- Their funding is from donor agencies and from beneficiaries on a cost-recovery basis



Academic BI Initiatives

- Housed within academic institutions
- Distinguished from Nudge Units mainly in their greater **focus on research**
- Sponsor research and experiments, and provide researchers with resources, e.g., database of behavioral research, laboratories
- Partner with governments and organizations that engage in behavioral science

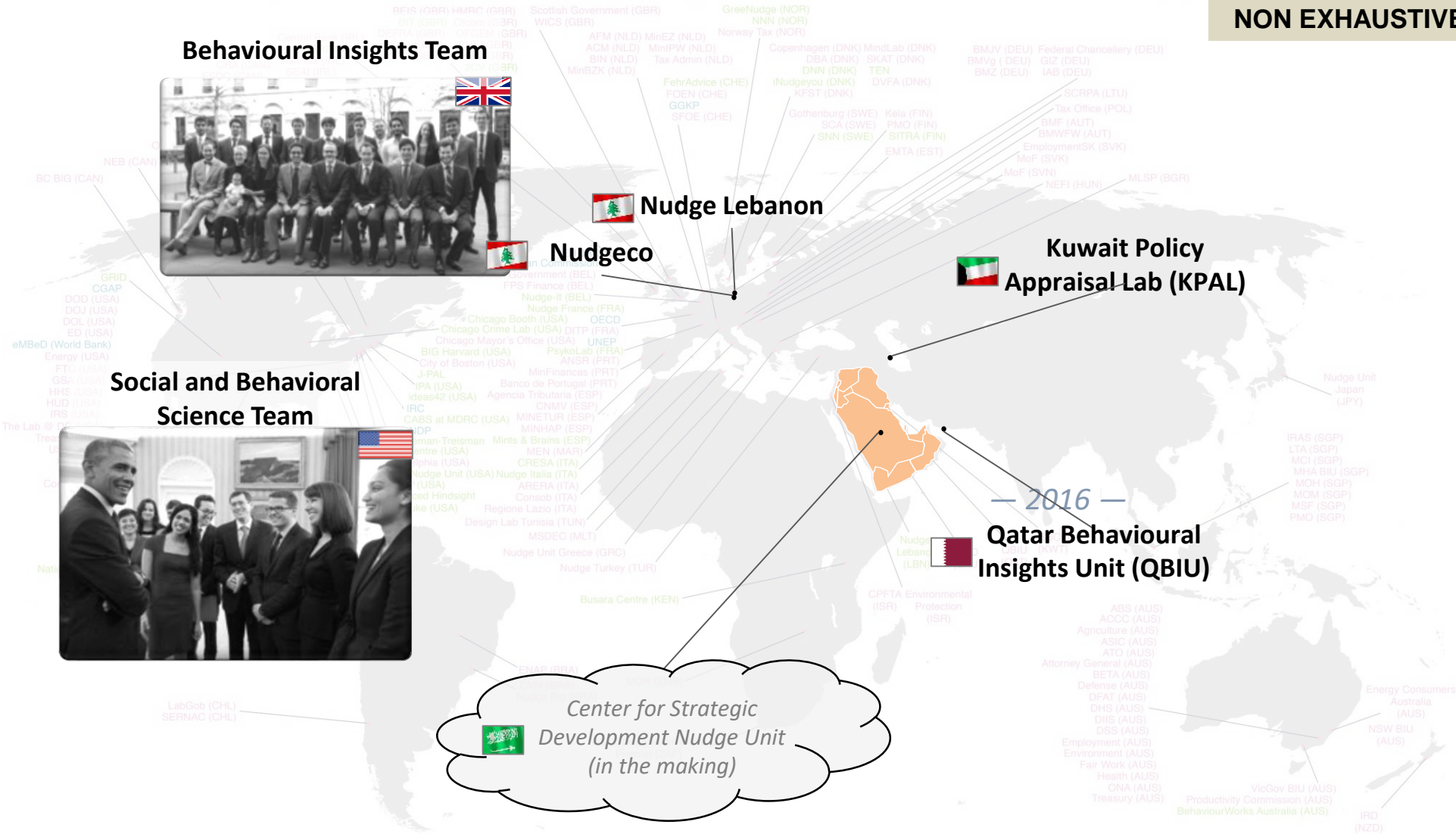


Social Purpose BI Companies

- The number of private dedicated behavioural insights initiatives is growing
- Even consulting firms are moving into these areas but partner with experts from academia and NGOs
- Many of these have on their boards well-known academics
- They provide nudge experiments and behavioural advisory services on a commercial basis

Nudging in public policy gained popularity thanks to establishment of Nudge Units worldwide

NON EXHAUSTIVE



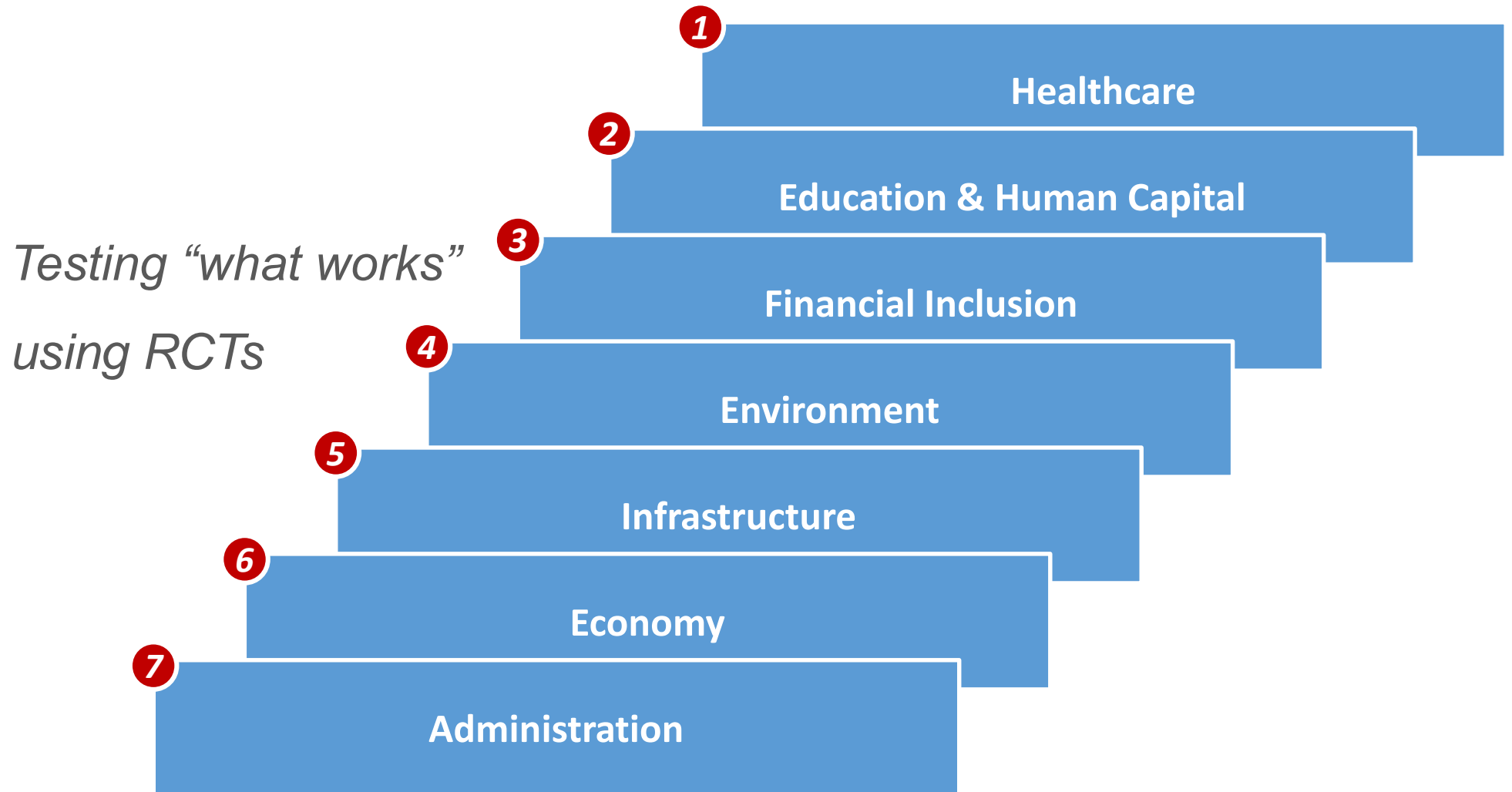
Institutions inside government

Institutions outside government

Multi-national organisations

Source: OECD (2018); QBIU, Nudge Lebanon

Nudging and BI have been tested in a variety of public policy areas



... And many others

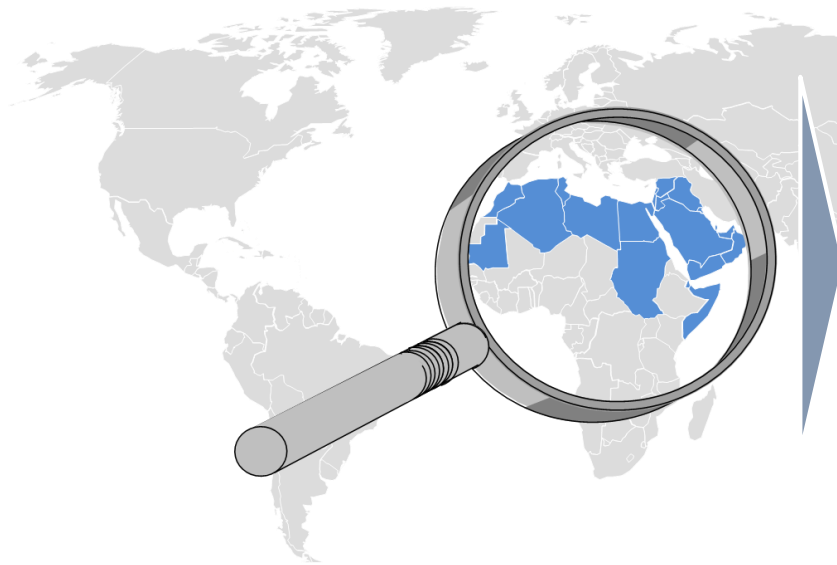
Most Arab countries have visions and strategy documents that seek to address complex policy challenges



| By Priority Level | Focus Areas | Strength of Behavioral Roots |
|-------------------|--------------------------------------|------------------------------|
| + | <i>Education & Human Capital</i> | |
| | <i>Healthcare</i> | |
| | <i>Administration</i> | |
| | <i>Living Environment</i> | |
| | <i>Economy</i> | |
| | <i>International positioning</i> | |
| - | <i>Infrastructure</i> | |

Development plans of most Arab countries include similar policy challenges many of which have strong behavioral roots

Public Policy Areas



- 1 Sustainability
- 2 Health
- 3 Education
- 4 Public Finance Management
- 5 Social Welfare
- 6 Economic Growth and Entrepreneurship
- 7 Public Administration and Service Delivery
- 8 Humanitarian and International Development

— Behavioral Roots
— Structural Roots



Small cost-effective tools could be tried to promote environmental objectives, using social norms... making it easy

1

Sustainability

Sustainability Policy Agenda

Plastic Use



Food Waste



Water and Energy



Littering



- *Social norms*
- *Tip-sheets*
- *Salience*
- *Defaults*

Many of the current health related challenges can be improved using behavioral insights ...

2

Health



Diabetes &
Obesity



Medication
Adherence



Mental Health
Problems



Cancer Screening



Traffic Accidents



Smoking



- *Reminders*
- *Social norms*
- *Saliency*
- *Emotions*
- *Commitment devices*

Many recent examples for using BI to address education-policy challenges targeting students, teachers and parents

3

Education

- Improving student education outcomes and performance (in standardized tests)
- Reduce drop-out and absenteeism rates
- Improve teacher motivation
- Increase parental engagement

Students



Teachers



Parents

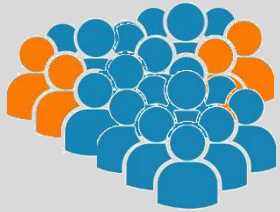


To encourage earlier payments, penalties are a classical tool but it turns out that using social norms is a powerful tool

4

Public Finance Management

Social Norms



Ego



Simplification

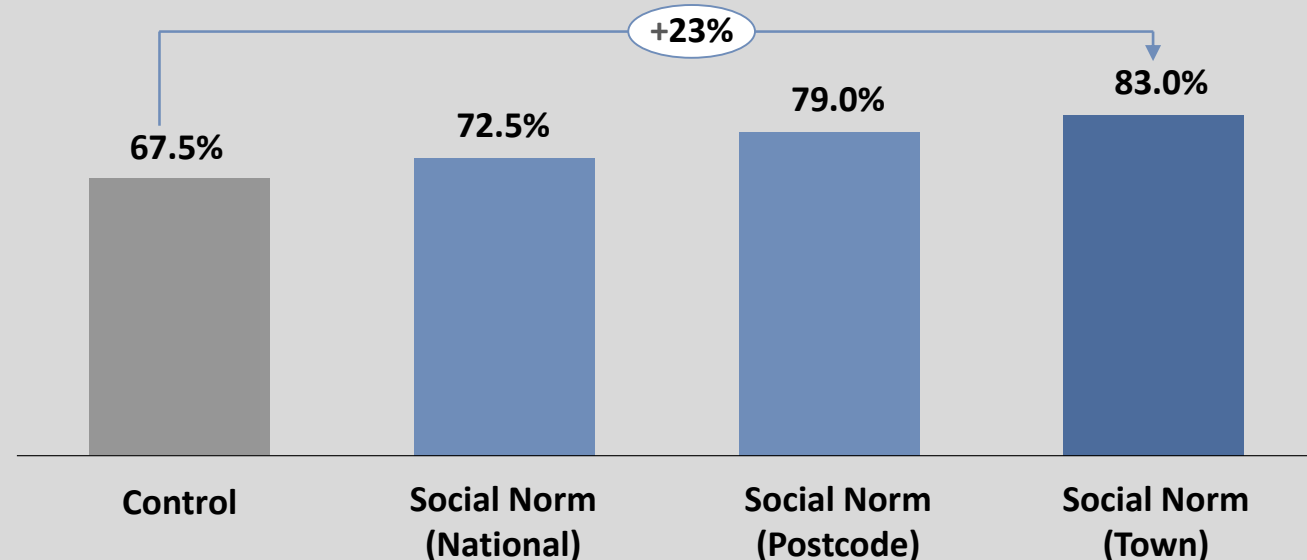


Nine out of ten people in your town pay their taxes on time!



UK

Percentage of Tax Debtors Paying Their Debt

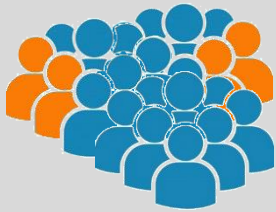


A similar experiment was tested in Lebanon to get people to pay their utilities bills on time ...

4

Public Finance Management

Social Norms



Simplification



Original Slip
(Control)



Hassle Factor



Social Norms



National Pride

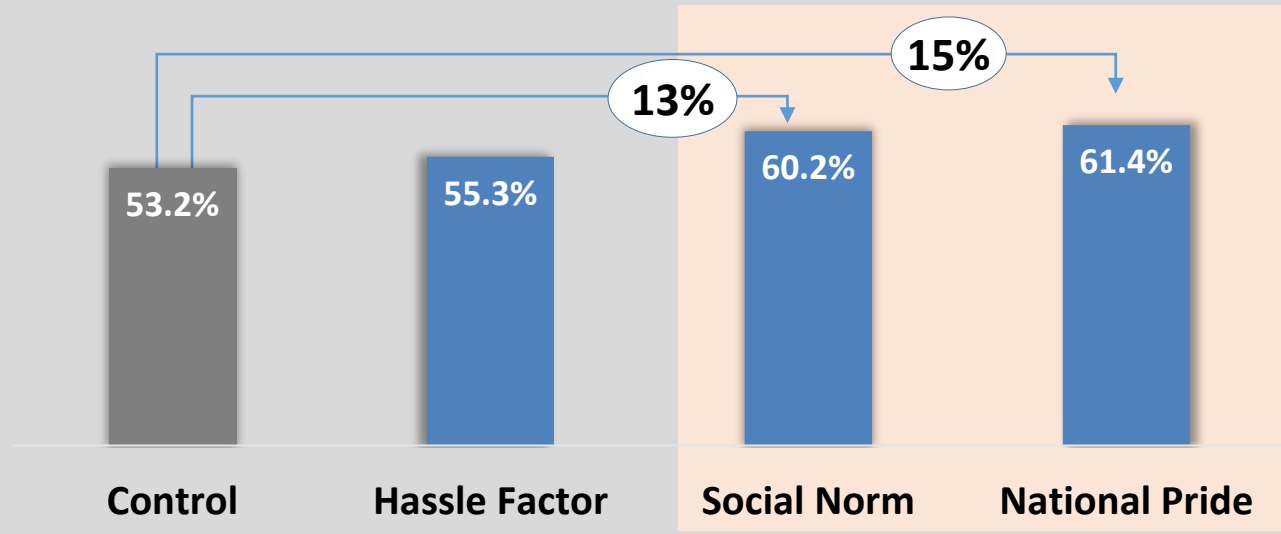
Nudges



Lebanon

Total Response to Reminder Slips by the 2nd Visit

(% of those who paid by the 2nd visit out of those who received the intervention)



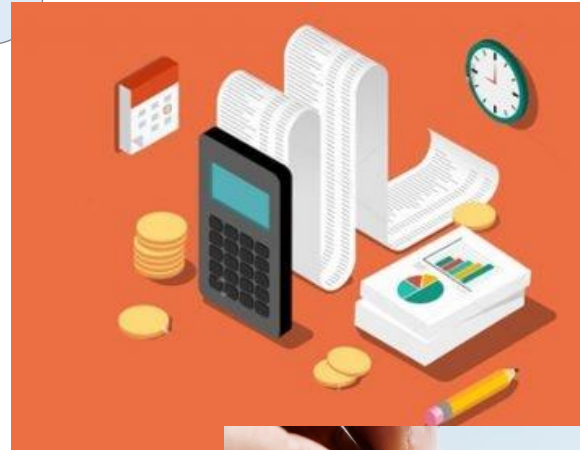
PFM-related interventions that use insights from behavioral sciences will become more relevant as a complementary tool

4

Public Finance
Management

- Increase payment of utilities and taxes on time
- Streamline fiscal applications and processes
- Improve compliance with rules and procedures

Bills Payment



Applications & Processes



Various inclusion-related interventions are used to empower women and include a more diverse workforce ...

5

Social Welfare

- Increasing savings for pension
- Reduce discrimination
- Increase women employment rates



Behaviorally informing workshops for entrepreneurs can have great impact on learning outcomes!

6

Economic Growth & Entrepreneurship

Commitment



Reciprocity



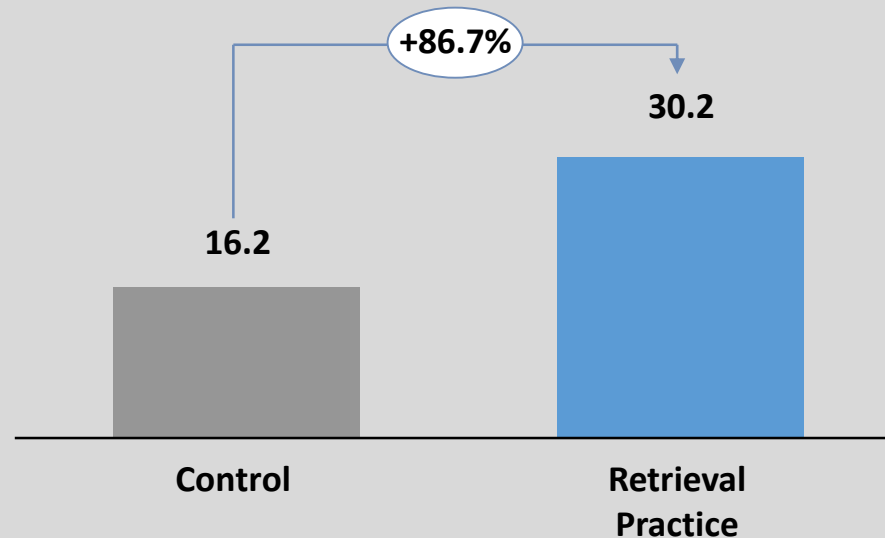
Ego



Reminder



Average Test Scores
(Out of 56)



Entrepreneurship interventions

6

Economic Growth
& Entrepreneurship

- Facilitate access to finance
- Streamline processes and innovate in service delivery for businesses
- Behaviorally informed training and entrepreneurship education



Simple choice architecture interventions can have an impact on the desired objective, e.g., shifting the signature box

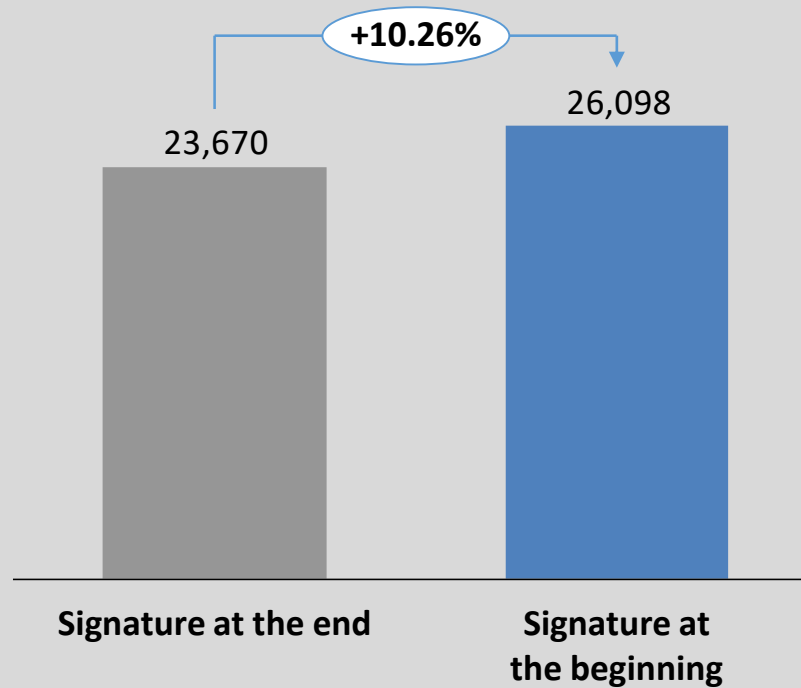
6

Public Administration
& Service Delivery

Priming



Average Reported Annual Usage per Car
(in miles)



Relocation of Signature Box

10-0379

Page 2 of 3

Saliency



Behavioral sciences opens up potential for experimentation, innovation & public service delivery – reinventing government

6

Public Administration & Service Delivery

Reduce traffic Violations



Streamline services



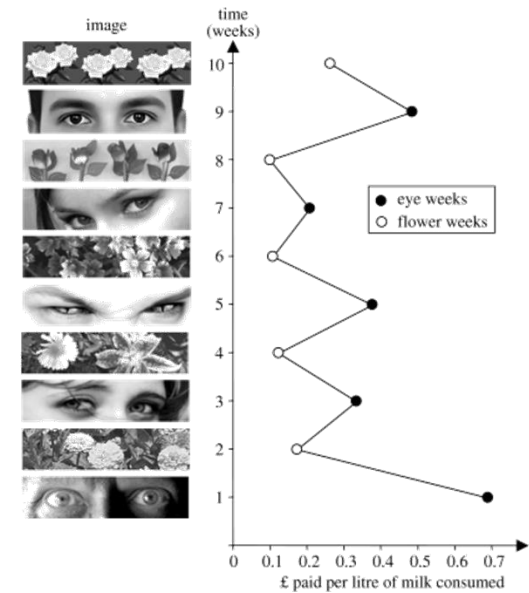
Reduce Corruption



Increase civic Engagement

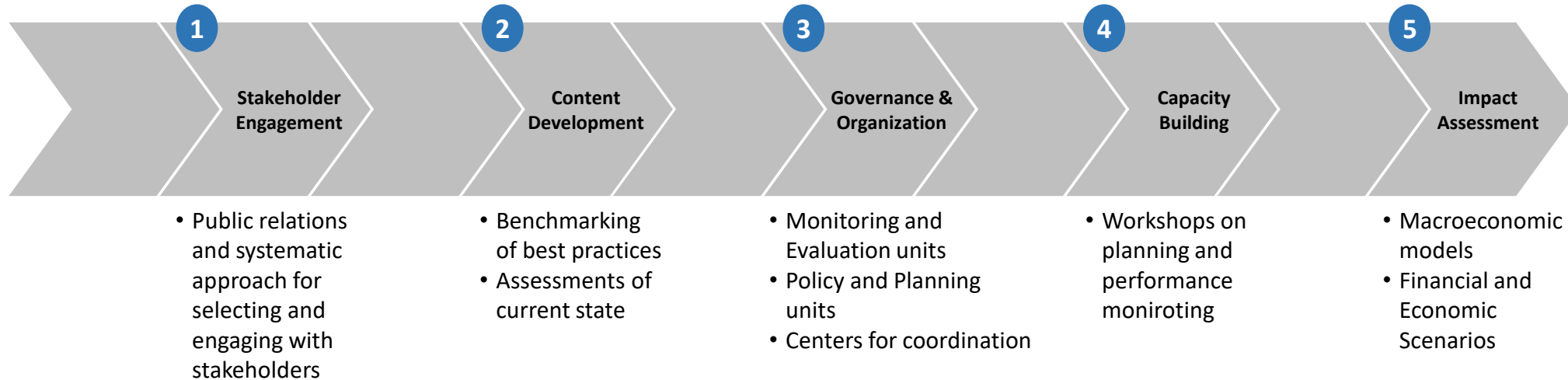


Amount Paid for Milk Consumed on Flowers Weeks vs. Eyes Weeks



Classical approach to Strategic Planning can be complemented by a behaviorally informed approach

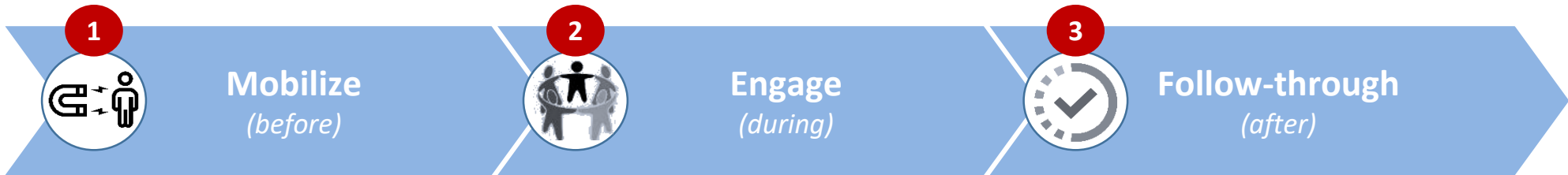
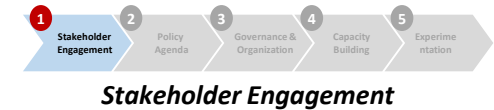
Classical Strategic Planning Approach



Behaviorally Informed Strategic Planning Approach



NL's “Mobilize, Engage, & Follow-Through” approach is a behaviorally informed stakeholder engagement framework

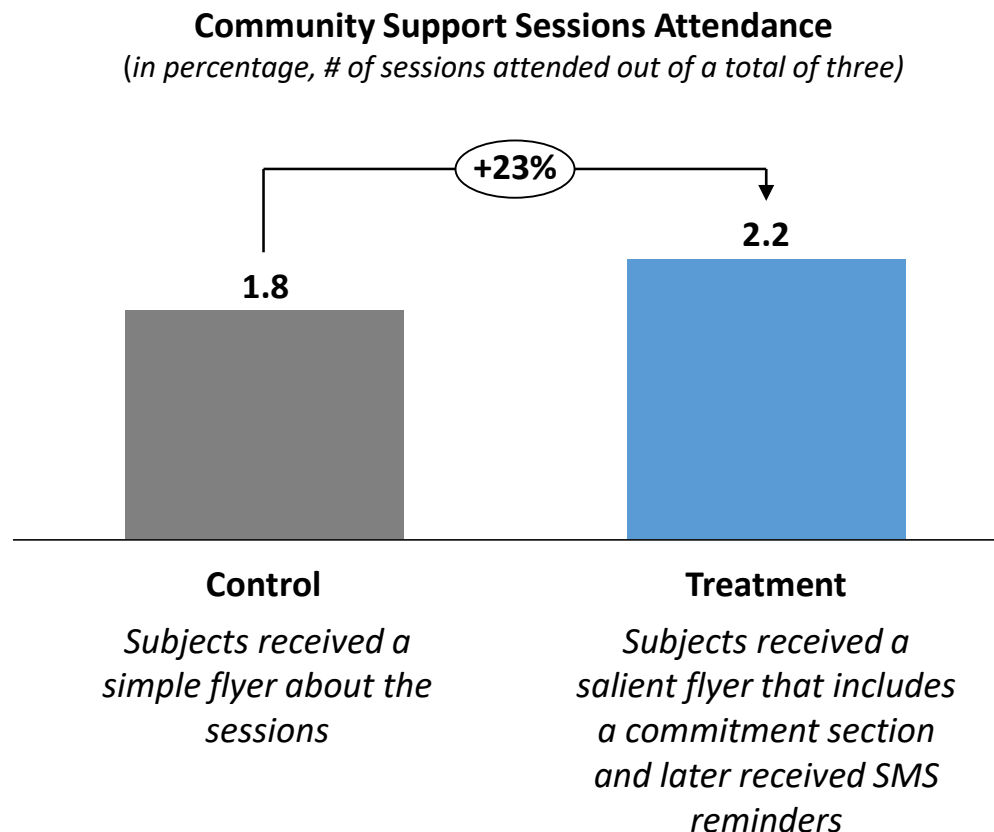


- *Capturing attention of target population*
- *Encouraging target individuals to attend events as a first step of capturing them in the system process*
- *Promoting participants to interact and participate during the event(s)*
- *Building a safe environment with the right mind-set to promote sharing and active participation and, most importantly, behavioural change*
- *Ensuring that participants follow-through with the what they learned and sustain the intended behavioral change*
- *Affirming that participants are ambassadors for behavioral change within their own communities*

The “Mobilize, Engage, & Follow-through” framework has universal applications for different challenges that transcend a specific policy area

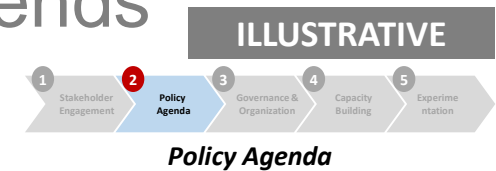
Increasing attendance of vulnerable youth to community support sessions

Nudge Lebanon increased the likelihood of vulnerable youth attending community support sessions by 23% using a commitment strategy accompanied with SMS reminders



The intervention was particularly effective on young male population increasing their total attendance by 55%

The policy agenda is driven through an assessment of local challenges, but also guided by recent trends



Driven by assessment of current challenges

- Development of a policy agenda for experimentation should be primarily driven by an assessment of the current situation
- This could be done by an evaluation of the behavioral roots of current policy areas
- It could also be driven by detailed stakeholder engagement sessions whose objectives are to understand their challenges and identify their behavioral bottlenecks

1

2

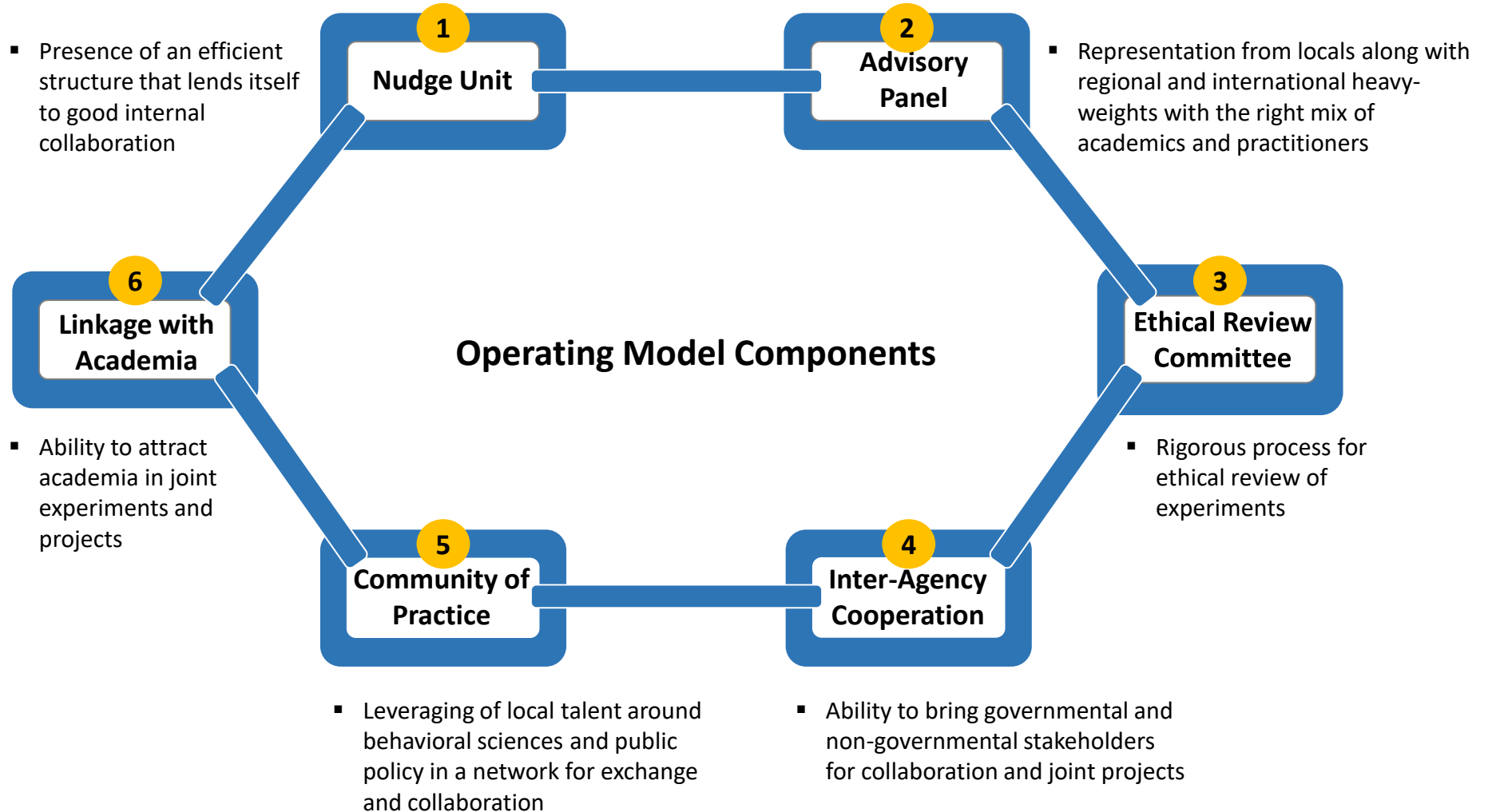
Policy Agenda of Experiments

- *Reducing energy level consumption*
- *Increasing screening for mental health*
- *Reducing obesity rates among children*
- *Improving workers welfare*
- *Enhancing parental engagement in children education*
- ...

Driven by review of regional and global experiments

- While all experiments should be related to current challenges, the trigger could be external
- As such, a constant review of regional and global experiments is always a way to shed lights on potential application into the local context

The behavioural components of success of the operating model depend on a number of enabling factors



Example team sizes of governmental nudge units

NON-EXHAUSTIVE



Nudge Lebanon (LEB): Around 12 members



Qatari Behavioural Insights Unit (QAT): 5 members



Office of Evaluation Sciences (USA): Around 15 members



The Innovation Hub (CAN): Around 10 members



NSW Behavioural Insights Unit (AUS): 14 members



Mind, Behavior, and Development Unit (eMBeD) (World Bank): 14 members



The Lab @ DC (USA): 14 members



Behavioural Insights Team (UK): Around 150 employees



Behavioural Insights - Regulatory Policy Division, OECD (FRA):
Around 30 members



Behavioural Economics Team of the Australian Government
(AUS): Around 45 members

Capacity building on behavioral insights and experimentation for various stakeholders involved in strategic planning



Workshops & Seminars

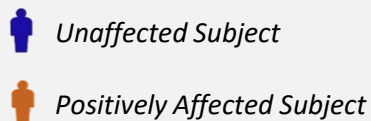
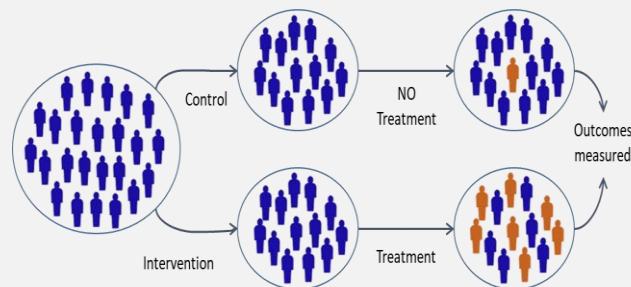
- Behavioral insights and nudging as well as its use in their work
- Behavioral maps (identify **biases** and **behavioral bottlenecks**)
- Develop specific tools for use by organizations in design and implementation of policy initiatives
- Basic statistics packages
- How to design experiments

New methods of evaluating policy impact in particular, randomized controlled trials (RCTs)



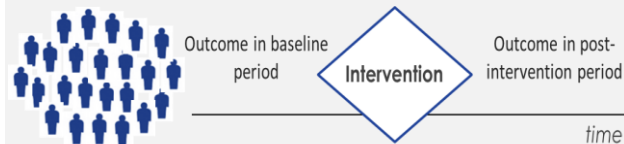
Randomized Controlled Trials (RCT)

- An RCT is an experiment in which participants are randomly allocated into groups, such that each group would experience a different condition
- Considered as the golden standard for experimentation



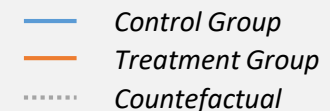
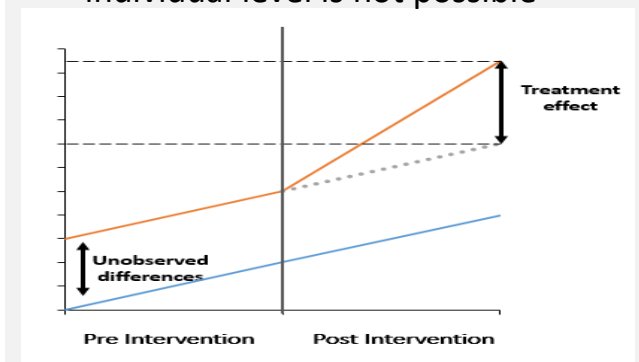
Pre-Post

- A Pre-post intervention consists of:
 - *Baseline*: Measuring outcome of interest for a defined period of time
 - *Intervention*: Introducing the variable & measuring the outcome of interest again
 - *Post-Intervention*: Measuring the impact of the intervention
- A pre-post assumes that the intervention was the only factor influencing any changes



Difference-in-Differences (DiD)

- DiD is a refined version of the pre-post methodology
- DiD controls for differences in the outcome between treatment and comparison groups during the pre-intervention period (i.e. baseline)
- DiD is a useful technique to use when randomisation on the individual level is not possible



A recap ...

- 1 Behavioral economics is now mainstream economics
- 2 Applications of BIs to public policy are on the rise, almost every country in the middle east either set up a nudge unit, or planning one, or started applying behavioral interventions in one or more policy areas outside dedicated units
- 3 This is transformative:
 - it will bring a new skillset in government – behavioral sciences
 - It will bring a new culture of experimentation and testing “what works”
 - It will reinvent government services in innovative ways
 - Applications to monitoring and evaluation add more realistic and accurate results



APPENDIX

NL was awarded 1 of 8 social innovation grants for the Arab region to set up the Consumer Citizen Lab



Eight Grants for Social Science Innovation in the Arab Region

BY CELESTE FORD — 10.03.2017



\$4.15 million in new support for policy development through university-based innovation and partnerships



GRANTEES

- 1 [Nudge Lebanon](#)
- 2 [American University in Cairo](#)
- 3 [American University of Beirut](#)
- 4 [Lebanese-American University](#)
- 5 [University of Minnesota](#)
- 6 [Friends of the British Council](#)
- 7 [The American Academic Research Institute in Iraq](#)
- 8 [University of North Carolina at Chapel Hill](#)

Carnegie Corporation of New York granted Nudge Lebanon \$500,000 to set up the first nongovernmental Arab Consumer Citizen Lab (CCL)

The purpose of CCL is to improve public policy through use of behavioral sciences in national policies & public services

- Extends the discipline of behavioral economics to universities in Arab region
- Builds capacity of students and future practitioners
- Support problem solving by stakeholders, including government agencies, nongovernmental organizations, and academics

Earlier this year, Nudge Lebanon held a conference on Behavioral Economics and Nudge in the Arab Region

PROGRAM

Friday, May 11th

17:00 – 17:30: Registration

17:30 – 18:00: Opening and Welcome Address

- *Dr. Nadia Cheikh* – Dean of the Faculty of Arts
- *Dr. Fadi Makki* - Founder and President of Nudge Lebanon; Member of the Future Council for Behavioral Sciences

18:00 – 19:30: **The Role of Academia and NGOs in Public Policy**

- Moderator:** *Dr. Bana Bashour* – Associate Dean of Arts and Sciences, Associate Professor of Philosophy, AUB
- Speakers:**
- *H.E. Prof. Fouad Ayoub* – President of the Lebanese Republic
 - *H.E. Dr. Khaled Mahdi* – Secretary General of the Ministry of Economic Development
 - *Dr. Fadi Makki* – Founder and President of Nudge Lebanon; Member of the Future Council for Behavioral Sciences at the World Economic Forum

19:30 – 20:00: Reception

Saturday, May 12th

8:00 – 9:00: Registration and networking breakfast

9:00 – 10:15: **Growth of Behavioral Economics and Nudge in the Arab Region**

- Moderator:** *Dr. Fadi Makki* – Founder and President of Nudge Lebanon; Member of the Future Council for Behavioral Sciences at the World Economic Forum
- Speakers:**
- *Dr. Mariam Chammat* – Executive Advisor at the Direction Interministerielle de la Transformation
 - *Dr. Lori Foster* – Professor of Industrial-Organizational Psychology, North Carolina State University; Former Member of the White House Social & Behavioral Sciences Team (SBST)
 - *Dr. Ramzi Mabsout* – Assistant Professor of Economics, Nudge Lebanon
 - *Faisal Naru* – Chief of Staff of the OECD Executive Director, Member of the Board of Trustees, Nudge Lebanon
 - *Dr. Erik Angner* – Associate Professor of Practice, Harvard Business Review

10:15 – 11:30: **Applying Behavioral Insights to Health and Well-being**

- Moderator:** *Dr. Iman Nuwayhid* – Professor and Director of the Center for Behavioral Sciences, AUB
- Speakers:**
- *Dr. Rabi Mohtar* – Dean of the Faculty of Agriculture, AUB
 - *Dr. Rabih El Chammay* – Head of National Mental Health, AUB
 - *Dr. Umar Taj* – Research Fellow at Warwick Business School, University of Warwick
 - *Dr. Lori Foster* – Professor of Industrial-Organizational Psychology, North Carolina State University

11:30 – 12:00: Break

12:00 – 13:15: **Compliance & Rule of Law: Rethinking Government Services Delivery through a Behavioral Lens**

- Moderator:** *Daniel Shephard* – Member of the Board of Trustees, Nudge Lebanon; Former Member of the White House Social and Behavioral Sciences Team (SBST)
- Speakers:**
- *H.E. Ghassan Moukheiber* – Lebanese MP; Member of the Board of Trustees, Nudge Lebanon
 - *Zhi Soon* – Director of Productivity, Behavioural Insights Team
 - *Dr. Georgios Dimitropoulos* – Assistant Professor, HBKU Law School; Member of the Advisory Board of Nudge Unit Greece
 - *Josh Martin* – Vice President, ideas42

13:15 – 14:30: **Applying Behavioral Insights and Nudge to Education**

- Moderator:** *Maha Haidar* – Makki - Co-Founder of Nudge Lebanon; Director of the MasterCard Foundation Scholars Program, AUB
- Speakers:**
- *Zhi Soon* – Director of Productivity, Behavioural Insights Team
 - *Dr. Saouma BouJaoude* – Associate Dean of the Faculty of Arts and Sciences, AUB; Member of the Board of Trustees, Nudge Lebanon
 - *Dr. Lori Foster* – Professor of Industrial-Organizational Psychology, North Carolina State University; Former Member of the White House Social & Behavioral Sciences Team (SBST)
 - *Jon Rozenbeek* – Doctoral Researcher, the University of Cambridge
 - *Dr. Mariam Chammat* – Executive Advisor at the French Behavioral Insights Unit at the Direction Interministerielle de la Transformation Publique

14:30 – 15:30: Lunch

15:30 – 16:45: **Applying Behavioral Insights to Financial and Social Inclusion**

- Moderator:** *Dr. Charlotte Karam* – Associate Dean of Programs, Associate Professor of Organizational Behavior, AUB; Director of the KIP Project
- Speakers:**
- *Josh Martin* – Vice President, ideas42
 - *Daniel Shephard* – Senior Advisor and Member of the Board of Trustees, Nudge Lebanon; Former Member of the White House Social & Behavioral Sciences Team (SBST)
 - *Jennifer Colville* – Team Leader, Innovation, Arab States, Bureau for Policy and Programme Support UNDP

16:45 – 18:00: **Behavioral Economics and Nudge in the Region**

- Moderator:** *Dr. Fadi Makki* – Founder and President of Nudge Lebanon; Member of the Future Council for Behavioral Sciences at the World Economic Forum
- Speakers:**
- *Dr. Rabi Mohtar* – Dean of the Faculty of Agriculture, AUB
 - *Dr. Rabih El Chammay* – Head of National Mental Health, AUB
 - *Dr. Umar Taj* – Research Fellow at Warwick Business School, University of Warwick
 - *Dr. Lori Foster* – Professor of Industrial-Organizational Psychology, North Carolina State University

- +300 Attendees
- 29 Speakers
- 30 Countries & 6 Nudge Units
- 25 Universities
- 17 International Organizations



The focus areas of Nudge Lebanon revolve around compliance and socio-economic policies

1

Compliance and the Rule of Law



Fighting Corruption



Reinforcing compliance and the rule of law (e.g., traffic)



Sustainability and Littering



Preventing violent extremism



Improving public service delivery (e.g., consumer protection)

2

Socio-Economic Policies



Improving social and financial inclusion



Improving healthy lifestyle and wellbeing



Supporting the Government in its Public Finance Management



Improving access to and quality of education



Improving humanitarian support and charitable giving



Promoting entrepreneurship