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Based on our research undertaken in cooperation with the United Nations University - Maastricht Economic Research Institute on Innovation and Technology (UNU – MERIT), and sponsored by Sia Partners and The Global Innovation Management Institute, we surveyed circa 250 government leaders in the UAE (at federal and regional levels), using tools in line with best practice studies conducted in Europe, Scandinavia, and Australia to see how public sector innovation is being conducted, which barriers are being faced, what are the drivers of innovation and the critical success factors, and what are the outcomes of innovation projects.

The days when innovation within governments was considered an oxymoron are long gone. Governments across the world are shifting from incremental improvements towards much more advanced and complex innovations, and the case of the UAE is no exception. On the contrary, what has emerged from the survey and the analysis of its results is that the UAE Government organisations are experiencing an unprecedented momentum when it comes to innovation. The results indicate high levels of “transformative” innovations and numerous positive impacts. In addition, the analysis shows that government entities are moving from focusing only on the front end of innovation (i.e. idea generation platforms) to the back-end (i.e. the development of the idea), and while doing so they are working on creating the right enablers (from culture and framework to processes) to do so.

The results make us realize that the UAE Government is well advanced on its journey to take a leadership role in public sector innovation and is undoubtedly a great case study. This white paper constitutes a first version of in-depth research in the area and will be followed up by future editions.

1 Please see methodology note.
UAE Government Innovation: an Overview

Innovation goes well beyond generating an idea or even the next big idea. An idea becomes an innovation when the cycle is completed and that idea matures into a sound concept that captures and delivers new value, from a new service to a new product, or even a new set of internal processes: innovation can take many forms. Our research indicates that UAE government entities are stronger at the early stages of the innovation management process (and at more abstract elements of the innovation framework), such as creativity and idea generation. For example, 55% of the respondents mentioned that their organisations fully support creativity and brainstorming (this percentage increases to 95% when "some" encouragement is included), and 40% answered that they have full idea generation mechanisms in place (90% including partial approaches). The government entities are less advanced when looking at other subsequent and more specific components such as innovation goals, strategies, and processes in place. For example, 35% of the respondents reported having specific innovation goals in place, and 50% indicated that their strategic goals could be linked to innovation. When looking at innovation strategies and innovation management processes, the results are also on the low side. Around 40% of the respondents were not aware of any innovation strategy or innovation management process in place in their organisations.

Chart 1
Creativity and Brainstorming Encouragement

Chart 2
Consistent Approach for Idea Gathering
While idea generation and creativity are largely reported (95%) & (85%), a lower number of entities reported to have some sort of innovation management process (60%) or some sort of innovation strategy in place (61%).
This gap between the large number of entities which have some sort of idea generation mechanism and creativity in place and the fewer number of entities reporting to have specific innovation processes and strategies is not, however, surprising. It demonstrates a well-known characteristic of innovation: organisations typically spend much more time working at the front-end of innovation, while less time and energy are devoted to the back-end. The gap is even higher when innovation strategy is contrasted with the overall strategy. 73% of the respondents consider that their organisations have a clear vision and a strategic plan in place, while only 29% report that there is a written innovation strategy in place.
With regard to innovation rates, the UAE organisations are reporting high levels: 85% of the respondents stated that their organisations have introduced at least one significant innovation in the past 2 years. The respondents were also asked to think of the Most Important Innovation (MII) introduced by their work unit and to classify it. The largest share of MII type reported was for service delivery innovations or new products launched (64.3%), followed by new or improved processes to support service delivery (50.3%), operational processes (44.1%), and communication innovations (32.9%). Half of the respondents (49.6%) matched the MII with only one type of innovation while the rest matched it with two or more types. This shows that the most significant innovations tend to be cross-cutting and are difficult to associate with only one type. For example, the introduction of a new service will most likely bring side effects, such as a set of innovations within the structure and the processes required to deliver that new service.

For the Most Important Innovations introduced according to the respondents, we also tried to identify if these MIIs were “transformative” in nature. These are innovations that completely change the way things are done, or provide large cost savings (at the working group or organisation level), or create an entirely new and important service. 80.8% of the respondents stated that their Most Important Innovation was a transformative one – a very large percentage. Caution is needed while interpreting this value, as this does not mean that almost 81% of all innovations are transformative in nature. This large percentage does, however, indicate that the large majority of the selected Most Important Innovations were transformative.

When looking at the effort described by the respondents to materialize the results of their Most Important Innovations, almost one third of the MIIs (29.8%) took 6 to 12 months to complete, 38.5% took 1 to 6 months, and close to another third (27.9%) took more than a year. The effort of the innovations was analyzed in the context of the results delivered (see section on Innovation Impacts) and the results were surprising, as a significant negative relationship was found between the time required and the results delivered: the longer the time, the fewer the results. A plausible explanation is that those innovations that require a high level of effort, from idea generation to implementation, can show diminishing returns. This could suggest that the adoption of lean innovation principles can be highly beneficial for public organisations.

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2 The definitions of innovation used in this paper are aligned with the definitions of the OECD Oslo Manual and the Global Innovation Management Institute.

3 The statistical analysis behind these results is outside the scope of this white paper. Readers keen to review them are kindly invited to contact the author.
85% of the respondents report that their organizations have introduced at least one significant innovation during the past 2 years.
During our research we examined various factors at both the individual and organisation levels. For the individuals, we analyzed their skills, domain knowledge, risk appetite and attitudes, while at the organisation level, we looked at leadership styles, incentives, and processes.

**Innovator Characteristics**

As mentioned before, innovation goes well beyond the front-end. Our research of the UAE Government entities yields quite interesting results. For example, almost one third of the respondents reported that their entities had innovation champions appointed and innovation teams were in place to steer the implementation. These two concepts are key; making innovation happen relies heavily on having the right people in the right place with the right level of commitment. The existence of identified innovators, well trained and with sound tools, and governance in place can make a large difference.

Our research also looked at the concept of risk, as it is closely linked with innovation. Risk is present in many stages of an innovation process, from the early stages up to the implementation phase. Pursuing innovation implies a certain degree of risk-taking, which has been identified\(^4\) as a characteristic of efficient innovation managers: risk-averse subjects are less innovative. The risk appetite can shape how individuals pursue (or abandon) innovations. We analyzed the risk appetite of the respondents at a scale from zero (unwilling to take any risk) to ten (fully prepared to take risks). Almost half of them (49%) were concentrated in the seven and eight marks while respondents with a risk appetite of four or lower were very rare (11.2%). Furthermore, in our analysis of risk, we examined the impact of risk-appetite on the results delivered by the Most Important Innovation in terms of positive effects for the organisation (i.e. better, faster, cheaper service, more efficiency, etc.) and found a significant positive association between the level of risk appetite and the positive results.

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The research revealed a positive association between the risk appetite of innovators and the results of their innovations.
We also reviewed the domain of respondent knowledge: (a) knowledge about new trends and developments, (b) knowledge about information and communication technologies relevant to the organisation. In the first domain, a large share of respondents (74%) reported to have full knowledge of the trends in the sector of their organisation. In the second domain, the percentage of respondents who reported full knowledge was somewhat lower (63%).

**Innovation Culture and the Role of Leadership**

After looking at the individual profiles of the innovators, we examined the collective profiles of the organisations, with special emphasis on the leadership style and the incentive mechanisms in place.

The role of leadership in innovation is pivotal: from giving individuals the time to innovate, supporting them through the innovation process, and creating a culture that encourages innovation, to providing the right incentives for doing so. We analyzed the various levels that entities are achieving in each of these aspects. When it comes to creating a culture that supports experimentation and accepts failure, reported levels are on the low side: 29.6% of the respondents state that their entities’ management fully support experimentation and 16.6% stated that their organisations have a culture that fully supports them when an innovation fails, with relatively high levels of no support (14.2% and 22.7%, respectively).
In addition, the leadership profiles of the organisations regarding innovation were assessed. The large majority was found cautious (63.2%) or open (30.4%) to innovation, while a very small minority (6.4%) was averse to innovation.

Charts 8, 9, and 10 show results supporting experimentation, culture towards failure, and leadership attitude. There are multiple opportunities for improvement here, as innovation flourishes when there is an open environment that tolerates risk of failure and encourages experimentation, even if the possibility of success is uncertain.

In addition to leadership profile and attitude towards innovation, there is another organisational aspect that is essential for innovation, and it is the incentives scheme in place.
Incentives can take many forms, from mechanisms rewarding idea generation (financial or non-financial) to allocating time for employees to innovate. Our research indicates that 32.7% of the organisations have incentives for employees who produce ideas (76.9% when also considering partial incentive mechanisms) and take part in their development, and 22.6% have specific time allocated for innovation (72.6% when also considering some sort of time allocation).

At a further analysis, incentives were broken down into two categories: a) incentives for identifying new ideas (i.e. idea awards, recognition, etc.), and b) incentives for taking part in the incubation and development of innovations. For each category, we identified the type of incentive, namely if it was non-monetary (i.e. recognition) from the senior management, non-monetary from external stakeholders, or monetary. For the idea generation, the majority of incentives were in the form of internal awards or recognition by the entities’ own senior management (40% of the respondents reported “Fully” in the relevant question) while monetary or external awards were much less reported (15% reported “Fully”). The incentives for the second category (taking part in the incubation and development of the innovations) were highly correlated with the first, with almost identical response rates.

**External Factors Driving / Hindering Innovation**

Drivers and barriers to innovation are often quoted and cited in innovation research although it is difficult to draw a clear line between what constitutes a driver and what constitutes a barrier. For example, budget constraints or restrictions can act as a driver for organisations to innovate in order to do ‘more with less’, but they can also constitute a barrier, as the lack of funds for innovation can compromise some key innovation projects or initiatives. For this reason, we grouped the main external forces that could have an impact on the innovation of the entities (regardless of whether this impact is positive or negative). These are the factors assigned with ‘high importance’, in descending order:

- Mandated introduction of new e-government or online services **(60.3%)**
- New policy priorities **(57%)**
- New laws and regulations **(49%)**
Measuring the impact of innovations is not a straightforward task and is an area of high subjectivity. However, it is important to try to understand the perceived impacts that innovations have within the different entities surveyed. We asked the respondents if their organisations had some sort of mechanism or measurement system in place to assess the results of their innovations, and only half of them responded positively. Nevertheless, although at low rates, encouraging signs also emerged as entities were looking at evaluating their innovation process regularly (27.4% fully implemented / 33.5% partially implemented), as well as evaluating the impact of their innovations in terms of outputs and outcomes (25.5% fully implemented / 37.0% partially implemented).

While analyzing the impact of the Most Important Innovations (MMI), respondents reported the following set of positive effects as being at the top: improvement of the quality of services, increase in the speed of delivering services, and delivering new services. The table below presents the ranking of the positive effects associated with these innovations.
Ranking of Positive Effects Associated with Innovations

1. Improved the quality of services
2. Increased the speed of delivering services
3. Allowed to deliver a new service
4. Improved accessibility
5. Enhanced communication
6. Increased employee satisfaction
7. Improved administration processes
8. Replaced old services
50% of the respondents reported that their organization measured (fully or partially) the impacts of their innovations.
Important conclusions arise when innovations are transformative in nature and when they are cross-cutting (i.e. they do not involve only one type of innovation). In these cases the impact reported was higher and there was a clear and significant positive association between these variables and the positive effects delivered within the entities.

In addition to reviewing the internal effects on the entities, we also analyzed the perceived impacts that innovations have on outcomes. This analysis does not, of course, imply any causality between innovations and outcomes, but it does give an indication of their association. To this end, we asked the respondents to identify, to their best knowledge, the positive and negative effects of their Most Important Innovation on a set of predefined outcomes.

The results of the analysis showed that the top rated positive outcomes were the increase of the quality of life of citizens and residents and the reduction of negative impacts on the environment. The top “neutrally” rated outcomes were the enhanced access to finance for citizens, residents, and businesses, and the decrease in the cost of living.

The statistical analysis behind these results is outside the scope of this white paper. Readers keen to review them are kindly invited to contact the authors.
Conclusions

Through our first analysis of the survey results, we have identified actions that entities could take towards improving their innovation process.

At the organisation level, the government entities could exploit their strengths at the front-end of the innovation process and move their efforts to the back-end, setting clear innovation intents/goals (and/or innovation strategies), and placing in parallel a careful focus on the role of leadership. Awareness should be created in this role in supporting failure and fostering experimentation, in order to create a culture that encourages innovation.

At the individual level, strong emphasis should be given in the development of senior management capabilities in the balance of risk and innovation. The government entities should build capabilities in the management of innovation and, more specifically, in the addressing and management of the risk embedded in the innovation process.

In regards to the innovation initiatives, the government entities should prioritize projects that are quicker to materialize in terms of time and, in the process, adopt the principles of lean innovation. Instead of waiting until the later stages of innovation projects, the focus should be on moving quickly and testing and challenging assumptions at the initial steps of the design and incubation mechanisms. This should help develop the concepts and prototype them in a rapid manner.

Lengthy innovation projects with time horizons of over six months to the one-year mark should be carefully re-assessed to determine whether or not these should continue, be re-scoped, or abandoned.

Finally, innovations that are cross-cutting and do not have a single focus on improving only one element in the outputs range should be prioritized.

This white paper summarizes one of the few quantitative research efforts undertaken in government innovation in the Middle East, and is a first step towards having a more systematic approach of measuring different aspects of how innovation happens and delivers results.
Our Perspective Going Forward

1. Place a stronger emphasis on leadership awareness, on how to balance risk and innovation, and support failure and foster experimentation.

2. Develop capabilities to manage risk and innovation at the innovator level.

3. Embed lean innovation design principles focusing on validating assumptions, rapid testing of concepts, and prototyping.

4. For those innovation initiatives with more than a 6 to 12-month horizon, review carefully before continuing, and abandon or re-scope if necessary.

5. Prioritize cross cutting innovations that are transformative in nature.
The primary research involved 243 questionnaire interviews conducted across UAE Federal entities, as well as Emirate-level entities. The respondents were, in their majority, middle and senior management personnel. All responses are confidential and data has been disaggregated, making it impossible to track individual responses.

The questionnaire was built incorporating lessons learned from other similar exercises around the world, (i.e. Innobarometer 2011; MEPIN 2011; Australian Public Service Commission 2012). The questions were peer-reviewed by experts in the field and were subject to extensive cognitive testing by a group of 35 UAE Government civil servants.

The statistical analysis behind these results included a variety of methods applied (i.e. generalized linear models). More details can be furnished upon request.
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