

Project Dammam – Making a City Smart

By Mark Reeson

Background

The Eastern Province is the largest province of Saudi Arabia by physical geography. The province's capital city is Dammam, which is the host to the majority of the region's population and is also the location of its seat of government. This region is the third most populous province of Saudi Arabia after Makkah and Riyadh, the nation's capital. The current Governor of the Eastern Province and therefore also the main stakeholder for the project is Prince Saud Bin Naif.

This region of Saudi Arabia is home to most of Saudi Arabia's oil production. In addition, this province hosts the city of Jubail which is the global hub for the chemical industry. Away from business and industry, this region is also a huge tourist attraction because of its location on the Persian Gulf and its close vicinity to the country of Bahrain.

The geography of the Eastern Province is very vital to the project strategy as it borders the Persian Gulf which contains the province's only maritime boundary with Iran, yet borders five other countries by land, namely Iraq, Kuwait, Oman, Qatar and the United Arab Emirates. Although a huge region, over half of the province is covered by the largely uninhabited Rub' Al Khali desert.

For so long this region has been fragmented and although covered by multiple municipalities and governed through many ministries there has never been any major structure to the governance or government of the province. In September 2015 it was decided that this had to change and that a new approach should be undertaken. The first step behind this was to set up a project team within the main Municipality Building in Dammam and then draw in a project team that could deliver the project to change the city, not just for a while but for a sustainable future.



The decision was made that the best way to deliver this major change would be to centralise the strategic planning of the whole region under one roof to be governed by one individual, the head of the Strategic Coordination Centre, Engineer Mosaad Mqhtani. His project team that would deliver this was made up of four different companies spanning eight different nationalities from Saudi Arabians, other Middle Eastern countries, American, German and Venezuelan, all headed up by Mark Reeson from England.

Although there were many major dignitaries involved in the decision making process of what was needed for the new Coordination Centre, a typical Arab approach to decision making, the major stakeholder after the Governing Prince was the Eastern Province’s Mayor, Jamal Nasser Al-Mulhim. With so much notoriety watching over the project this made every step sensitive to the needs of those making the decisions and also the community that would be affected by the delivery of this new approach to project management in the whole province.

What is the Strategic Coordination Centre?

The Strategic Coordination Centre was the result of the proposal to centralise the coordination of projects throughout all the municipalities in the region. For far too long each municipality and authority had work independent from one another therefore creating a counterproductive working environment. This would then allow and demonstrate for a new way to look at utilising the resources within the Eastern Province more efficiently. What this new approach would offer was a clearer picture of what is happening in the province and more importantly, to allow people to understand why it is happening.

Further to this it was decided that a new way of selecting and prioritising projects should be brought into force through the new department. The prioritisation of work would be based on the need of the work rather than simply a wish and to also eliminate the amount redundant work which takes place within the region where roads, rails and electrical cabling is dug up once and then within weeks dug up again.

As a further aspect to make this work more effectively, it was decided to enlist a team to write a specific bespoke piece of software that could monitor, control and report the whole region in one system to modernise the process of how municipality work was recorded. In addition to the requirement of the IT System, there would need to be a new procedural set up for the department and these procedures, objectives and the governance behind them would have to be drafted from scratch and then gain the highest level of stakeholder approval.



As another part of the new Coordination Centre, it was also decided to create a new project management approach for delivery of all projects across the province which would involve researching the best approaches to project management and then drafting out a new project management manual so be able to be used as a guide book for all project

managers within the region. Finally, one final request by the Governor due to his passion towards the subject, he stated to the Mayor that any approach and any new introductions must meet to the standards he decreed as a sustainable solution. This approach was encapsulated into a new model that had been designed previously called the SMART model which Mark Reeson had previously used to create SMART projects and businesses. It was decided to uplift this model to cover the full city and then with the addition of the Fanar Consulting approach to increased mobility and greater accessibility the model was shaped to create the City SMART model.

All this planning was fine but this would therefore also include the training of all the new members of staff joining the department in the procedural changes, the new IT system, on how to manage the Project Management delivery and of course the new model, City SMART.

Not wanting to stop at this, the Municipality made another request within the planning phase that the project team should further enhance the knowledge of the region with the creation and maintenance of a new asset register for all municipalities and authorities' assets from the beginning again, a full inventory of the region. By doing this and bringing the planning under one department the main objective for the province was to have greater alignment and synergy of all the authorities' current plans and then merge them into one singular strategic annual and five-year plan. The last part of the project scope to create the department, was the department itself, requiring to locate or build the new office development, load it correctly and then prepare the office spaces for occupation.

Why Build the Strategic Coordination Centre?

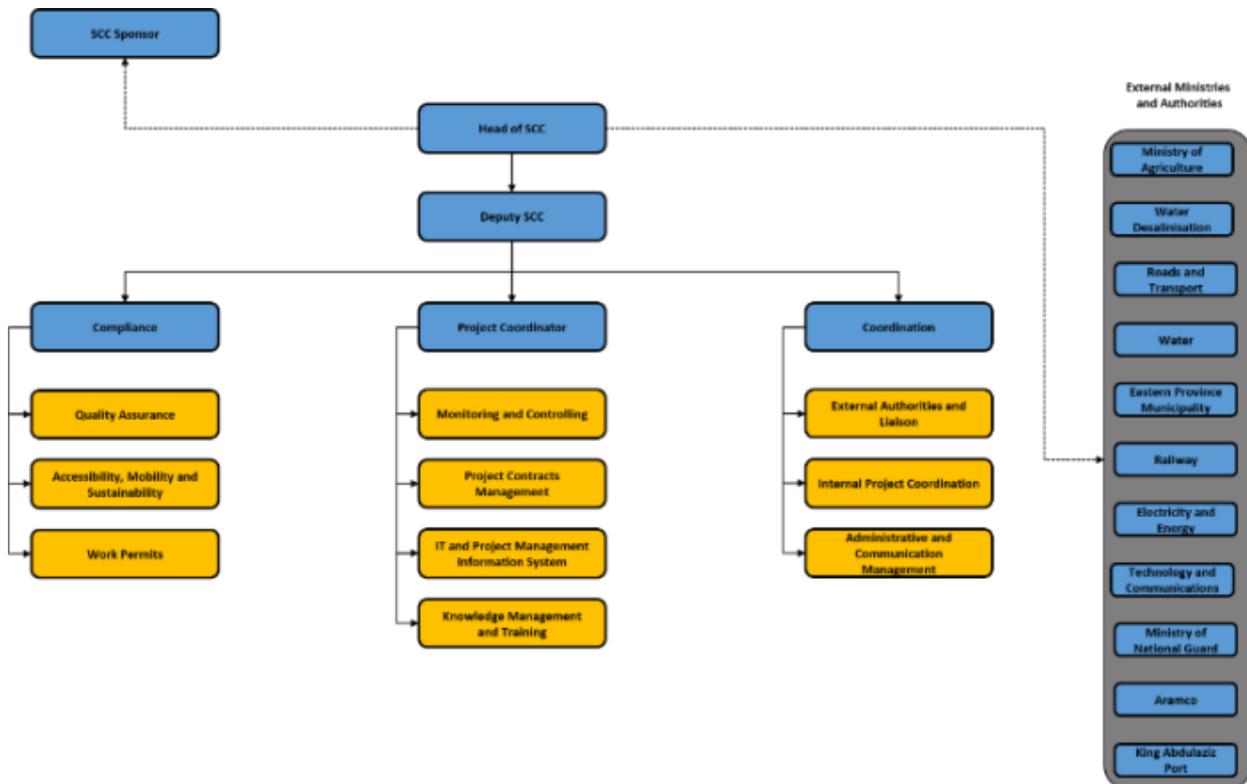
This question was asked and challenged by many of the ministries that had ran their own organisations and strategies for many years and could not see the benefit of the new centralised approach. Explaining to some of the senior ministries that hold a huge sway of power involved many presentations and reports to demonstrate the importance behind a new way to develop a centralised coordination of all projects. With the creation of the new department it would give greater focus and visibility to all the municipal projects and not simply the large scale projects that fill the skyline. Explaining to the group that having one department that could show this off would therefore show to the region, its community and to Saudi Arabia as a whole that the Eastern Province could be the flagship behind making a real difference which was then further supported by a statement made called Saudi Vision 2030 by the Deputy Crown Prince Mohammed bin Salman where he explained in April 2016 that Saudi Arabia had a new ambition to reshape and to transform its economy moving away from its reliance on the oil trade.

This announcement came at a very timely moment when questions were still being asked about the viability of such a large scale change and before long the message was going around the key offices of Dammam about a new vision where their new Strategic Coordination Centre would become "A Future Model for Decision Enabling and Delivery Support to create a cleaner, smarter city"

What will be the role of Strategic Coordination Centre?

By creating this new department there was a clear vision now for what it would do and why it was needed. By having one central location for everything project management related for the whole region it would allow for the introduction of standardised project management governance system. By introducing this it would further be assisted by the procedural work of Fanar Consulting by enhancing the Quality Assurance within the province for processes and procedures which it would hope would then increase the stakeholder engagement throughout the municipality with a greater control being taken over the issuance of work permits and licences. Finally, its role would then be cemented by becoming the mobility, accessibility and

sustainability champions, initially for the region, but with the correct handling and communication for the whole of the Kingdom creating the first step towards the Deputy Crown Prince’s vision for 2030.



Explaining the benefits of a centralised Strategic Coordination Centre at first was never easy but four keys areas started to emerge that became the focus of attention of the ministries and the municipalities together. They started to understand the standardised processes and improved productivity would create an environment where their money would go further and at a time when budgets had been trimmed due to international unrest and conflicts on two fronts having a little extra made a huge difference to how they could manage their own workloads. Also, by having one organisation that could look at the greater picture geographically allowed for greater risk mitigation which could lead to improvements that would give an enhanced quality of service with a frontline focus which had never been seen before by promoting the use of risk management and gaining greater awareness to the whole region.

With this improved visibility it could show the province in a new light and the community as a whole could benefit which would hopefully attract further interest and further business investment for the future. It was imperative that the people of the region and beyond could see what we were doing and what we were creating for the future. The last of the benefits that became clearer as the planning moved forward was the use of the Supply SMART aspect of the model which allowed an integrated supply chain which could offer greater cost optimisation on all the work that needed to be completed by both the municipalities and the authorities.

All this planning was fine but it was not without many associated risks to the delivery and also post-delivery with the lack of acceptance by the authorities and the municipalities let alone the community as a population. One of the major risks was that by changing the operational processes to dealing with the work then there could be a lack of compliance also which might lead to causing a process failure. This was identified as something that had to be delivered from the first day to ensure a baseline of understanding had been established. In addition, if the project team did not communicate the message well enough then the lack of transparency of the changes would lead to a failure to gain authority buy-in leading to rejection even at the later stages of the projects. This would mean that the Eastern Province would have to consider communicating to a wider audience than ever considered before.

Another risk that we soon became aware of was the region's lack of strategic expertise that existed and so could cause coordination inconsistencies and so the need for the right people running the Strategic Coordination Centre once it was open became clear very quickly. This was identified early and so the key posts within the Coordination Centre were to be filled by international staff and it was their responsibility to start the training programme to identify and coach their Saudi replacements. Something far simpler and well within our control was that by having a change in processes and policies this could cause confusion amongst the staff, the contractors and the organisations and authorities so greater clarity once again would be the main aim of the project. Finally, we had one last project risk that we knew of that we didn't truly understand until the project began. Everything that we produced as a team, had to be translated into Arabic, but as we soon learned as the documentation was being generated, having the right person with the right knowledge on the subject matter and the ability to contextualise the words is a rare and exclusive skill and then was going to be very hard to find as unlike many languages, Arabic does not have a direct translation as it is spoken much as English was done in the late 1800s, early 1900s. As an example, the number twenty-four is not translated as twenty-four but instead four and twenty.

Setting the Standard

All our ideas were fine and knowing our own competence was one thing, but to understand a different culture and their approach to the work that had to be done was a different challenge. The Eastern province had its own standards on many areas and here is an idea of what the standards had to fit with when it came to each of the deliverables and procedures and processes.

Eastern Province Projects Governance and Compliance:

Assurance of the compliance with the Quality, ISO, Accessibility, Mobility, Sustainability, Safety, Smart-Cities, for all criteria of all projects and initiatives undertaken by the Eastern Province Municipality.

Eastern Province Programme and Portfolio Management Office:

Assessment, planning, control, coordination and reporting of the different programmes, projects and initiatives undertaken by the Eastern Province Municipality.

Eastern Province Projects Coordination and Planning:

Coordination, planning and execution with all internal and external authorities of all the works required by the projects and initiatives undertaken by the Eastern Province Municipality.

There was a clear show of rules and regulations that needed to be abided by and plenty of authorities and organisational bodies ready to watch each step of the project.

So what is being City SMART?



The City SMART approach was based on the original model created by Mark Reeson for the enhancement of learning through action rather than theory which he created to improve project competence based around a student or delegates competence rather than simply knowledge by Action Based Learning. With this model it was further adapted to create a version for Business Management, Event Management and Supply Chain Management formulating his own SMART family.

As a new challenge however, asking this to be fully uplifted to take on board the working of a city it required the assistance of the Fanar Consulting team and their views on increased mobility and greater accessibility to truly bring the model to life and create a new inspirational model for the future.

This next section of the document will explain the enhancements that were included to make the whole operation for the eastern Province fully sustainable for a future whereby the change would have the greatest impact possible.

Increased Mobility:



The first aspect of the three elements to create the true change within Dammam and the Eastern Province was increased mobility. What was recognised early as the solution to this project was that it is important to understand the essential need for people to access to the right goods, services and social and economic connections. By introducing this change it was important to recognise the growing global population with an increasing affluence and the urban sprawl occurring in the region. Aligning that with the ever declining transport costs was pushing the demand for mobility upwards. People in Saudi Arabia now clearly want to travel, they want to move. The challenge is getting them to move to this region instead of the previously more popular destinations such as Riyadh, Madinah, Makkah or Jeddah. This was what the Governor had planned but with growth comes greater environmental, economic and public health challenges. These would

have to also be addressed. Add the fact that transport is an energy intensive resource which is responsible for sizeable proportion of greenhouse gases whilst congestion also holds back economic productivity and getting the balance right was clearly going to be a real challenge. This would mean a new programme to be launched again in the near future for an improved road and rail system. However, the balance which could also work in our favour was that with greater mobility it would improve the region by making it rich in innovation, intelligence and this could then help develop the newly planned integrated citywide systems and so becoming more City SMART.

Greater Accessibility:



The next element that had to be addressed was the theme of greater accessibility. Information management and accessibility to it has changed due to the increased connectivity available these days through so many devices. Technology has created an emphasis on lifelong learning meaning therefore that there is a greater demand for information reception.

What this is creating in the region is a rapidly changing world who want to attain or develop new skillsets in their lives. This therefore placed a greater demand on the infrastructure provision. There are over 53 million users of WhatsApp in the Kingdom as this is the most popular form of communication and as Saudi Arabia becomes more IT aware they have grown with their social media usage becoming the 14th largest in the world in only a few years. With this new information surge this increases their opportunities to move between professions such as engineering, law, academia and business far easier. The people of the Eastern province are now taking greater responsibility for their own learning and information gathering which therefore leads to the municipality having to put greater investment into informational needs and the modes of delivery to improve social and economic mobility. Put simply, the greater the population the greater the demand on the informational sources and without improved facilitation the population will not be attracted and neither will the business or financial investment.

Future Facing Sustainability:



The last aspect of the Governor's vision was to ensure that we didn't make a change for now but for the next fifty years, so anything we did related to the project delivery must have within it, a Future Facing Sustainability Model. The first area of concern was that we had to ensure that the supplies of water, energy and food for all by managing the synergies and trade-offs of all that we had discussed before. We had to create a clear context of environmental, economic, social and technical, legal and political changes and look into the right direction to decarbonise social and economic systems whilst

stabilising the climate by promoting behavioural changes in the region. The message had to be sent out, “Sustainability is not about being green, it is about being aware”. We had a remit whereby we had to safeguard terrestrial, freshwater and marine assets that underpin human well-being and improve the quality of life. To do this, we would have to undertake an exercise to understand the relationships between biodiversity and their related ecosystems. The aim was to get the most out of the region and what it could offer and not to sacrifice the land as a result of growth, creating a harmonious relationship between the population and the land. The long term plan was to build a healthy, resilient and productive city by identifying and shaping innovations for a better urban environment with more efficient services and infrastructures. In doing this we will be promoting sustainable rural future to feed rising, with an affluent population by investigating in alternative land uses, food systems and ecosystem options. Questions needed to be answered with the changing and growing population, such as what food was needed, where it would come from and how it could be brought into the city in the safest and most efficient way. One challenge that would always remain was the location of the Eastern Province and its closeness to Riyadh. However, this was seen as an opportunity to draw from Riyadh and to reverse the trend of people leaving for the capital city.

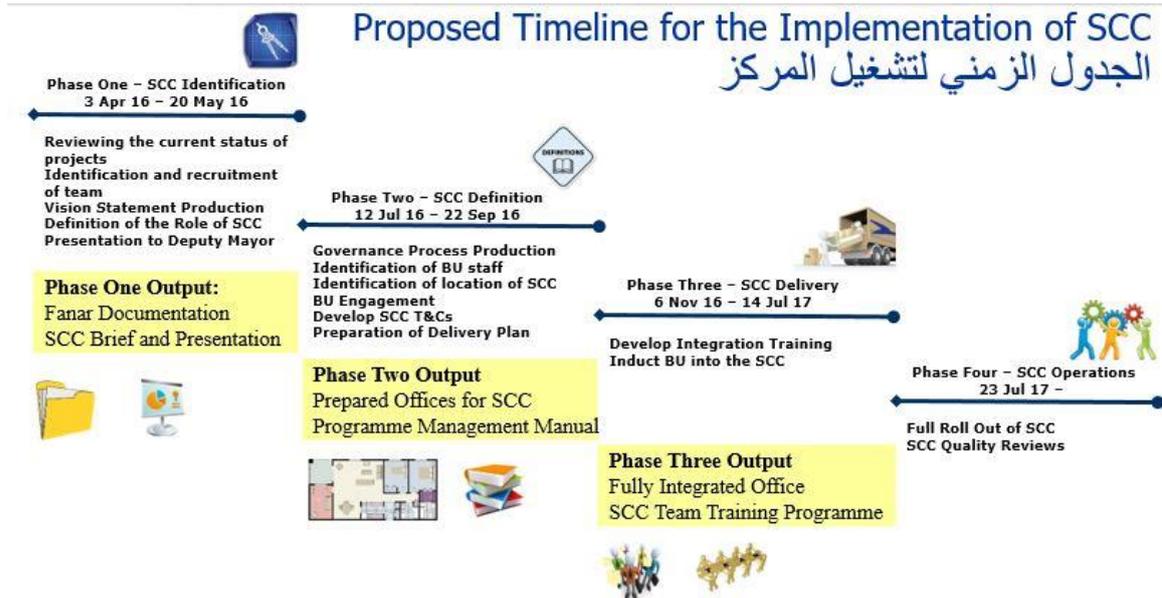
The true goal for the Eastern Province which would open the world’s eyes to how Saudi Arabia is viewed was to improve human health by clarifying and developing solutions to the complex interactions among environmental change, pollution, disease and social well-being. This would lead to educational steps to encourage sustainable consumption and production equitable to the changing social and environmental impacts of consumption, which would in turn be monitored and controlled by increasing the social resilience to any future threats by building adaptive governance systems and developing early warning systems for preventative actions against future issues or risks. This would therefore limit the waste being produced by the region and the waste produced would be more efficiently and safely disposed. The City SMART Model’s fifth element allowed for the recognition of the need to change which meant that all plans stayed ‘live’ which would deliver the city for tomorrow but also for the next fifty years.

Delivery and Approach

To create this delivery in a full, detailed and controlled manner it was decided to separate the whole thing into four phases and then also into three main work streams. The work streams would all be named after aspects that would have a deliverable with them, the PMO Project, the SCC Project and then a third that had become very apparent called the OLA or Operational Level Agreement Project.

Having the team separating up the work and then delivering it in the phases came under many occasions of challenge for approach and style but once the lead for the project had been established then the project’s momentum grew and the delivery became more rapid in its approach.

This project has now reached its final stages of the full delivery and at the time of writing the offices are now in place and ready to be filled for full roll out. With the new roll out ready to bring in the benefits and the vision it has planned this project, after many challenges has been delivered as a real success.



Phase One Benefits – Establishing the Traction

Working in an environment which was alien to many initially then made the project management team and the senior official of the Eastern Province challenge what benefits really existed from the first phase to then create the momentum for the second phase through until December. To understand whether there were any benefits behind the new centralisation approach and how this would truly help the organisation, it was decided to use the McKinsey model using three defined questions. The model asks three simple questions and if the answer to all three is no, then this would establish that the project was not a good idea and that nothing could be gained by continuing the work. However, by reviewing the questions this will demonstrate, with a simple yes to any or all of the questions why this project would bring and had brought major improvements to the current practices even in these early stages.

1. Is centralisation mandated in KSA?

The first question to ask is whether the organisation had a choice. By reviewing the previous organisation’s annual report on performance and then on the consolidated accounts, it was possible to review each of the authorities, how and where spends had occurred and already sight the areas of duplication and repetition geographically of the tasks carried out. In this case, the answer was immediately yes to centralisation of the new service. By contrast, centralisation was found not to be essential for compliance with governance as each business unit had managed its own project’s compliance. This meant that although we could show early improvements for the centralisation approach, the proposal to appoint a head of one single department would get a no for this question and would meet great resistance. This meant that we had to review the project further to ascertain if we could gain a clear yes from either question two or three.

2. Would centralisation add significant value of up to 10 percent?

If we had decided we could not yet prove that centralisation should be mandated, it meant that it should be adopted only if it could prove to add significant value to the organisation. The problem however, was how to judge and measure whether it would do so. This point was particularly difficult because many organisation's strategies rarely provided any clarity about their major sources of additional value that might underpin our argument for bringing different business units and activities together. The solution to this was to set a benchmark which was high enough so that the benefits of the centralisation department would probably far outweigh any of the disadvantages, making the risks of the introduction of this project worth taking. Specifically, it was suggested asking: "Does the proposed initiative either add 10 percent to the value of the organisation's delivery or would it reduce waste making it a more sustainable option by the same value? To achieve this, it was recommended that we start a feasibility study considering whether the project to create the department met the 10 percent benchmark on its own. If this was not the case, which we discovered, there would have to be an assessment we carried out to see whether it was to be part of some larger initiative that would then meet the 10 percent hurdle. In practice, the answer to the 10 percent question did not require fine-grained calculations but what was required were judgments about the significance of the new department, either on its own or as part of a larger initiative.

3. Does centralisation lower project risk?

Most centralisation proposals would not pass the first two questions, namely they would not be mandated and they did not prove to represent major sources of additional value. More often, the benefit of the new department demonstrated smaller improvements in costs or quality and a significant reduction in wasted resource and time. Armed with this information, the risks associated with the new centralisation such as business rigidity, reduced motivation, bureaucracy and authoritarian distraction were greater than the value created. Hence, the proposal to run the project was halted until there was clear definition that these risks had a low impact. The initiative to centralise all activities that could be run at a strategic level received a yes result to this question. Costs of manpower, resources and materials could clearly be saved through economies of scale and the risks of negative side effects were clearly low. Centralised strategic planning and coordination were not key to the organisation's flexibility of each individual business unit, nor were their representatives or managers likely to feel less motivated by losing direct control of the strategic coordination. Moreover, the risks of bureaucratic inefficiency and distraction from the main aim of the new department could be reduced to a minimum if the new Strategic Coordination Centre was led by a competent expert who could then periodically report to the head of all the business units to allow each business unit greater time to focus on the key matter of their project delivery. A report to describe the current and the proposed position of project strategic planning and coordination is produced and presented to the Governor and Mayor to give clear indication to the senior management before the final decision of the size, scale and the role of the Strategic Coordination Centre was then approved.

Making a Difference – Royal Approval and the Eight Year Roll Out

On 16th May, there was a meeting in Riyadh where the senior management officials from the big five municipalities held a strategic discussion about the formal role out of Coordination Centres in the full Kingdom. The big five cities that make all strategic decisions on behalf of the kingdom are Riyadh, Makkah, Jeddah, Madinah and Eastern Region (Dammam).



The main purpose of the meeting was to establish the next step which is aiming at the coordination all efforts and to assure same standards and understanding throughout the five cities. This would then arrange the future for project management delivery in the Kingdom for the structure, roles, responsibilities and authorities of all Coordination Centre departments. It was recognised that not all municipalities are at the same level of organisation maturity and understanding of the purpose of the Coordination Centre.

This would be seen as a huge step towards the introduction of the Saudi Vision 2030 programme. The decision was made that the City Smart approach was the ideal model to follow and so the Kingdom's approach in the short and medium term would be to organise this department to be the guide of Ministry of Finance for assigning the required budget, based on the priorities of urban development of cities not based on the services sector requests.

The roll out plan for the City Smart Coordination Centres will be:

- The big 5 cities in one year 1438H (2017)
- The next 80 cities in the next 3 years between 2018 - 2020
- The remaining 135 cities between 2021 - 2025
- By the end of 2016 they would formalise all municipality urban development plans for their cities to assign the 1438H (2017) budget

The Makkah officials have suggested to outsource the work to the Coordination Centre specialists so they could then focus the Kingdom's investment into services provision. The new roll out plan has then recently been reviewed and approved by Mark Reeson for the Ministry Headquarters for the Office for Crown Prince Mohammed bin Salman. The Coordination Centres for a future facing sustainable approach will include

- Development of a Coordination Centre in all municipalities
- All municipalities are to be developed to align with the Smart City modelling
- Priorities of urban development through a good knowledge and active software
- Lessons Learned and Knowledge Management throughout the big five municipalities
- The governance of KSA will fully support this direction and will provide facilities to transfer the current situation to the new approach for the future

About the Author



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Professor Mark Reeson is a project management specialist with over thirty years' experience. A Fellow of the Association for Project Management, he has been involved in many project and programme consultative roles. Most recently Mark has been working with the Saudi Arabian Municipality of the Eastern Province to change the way that project management is carried out within the region, using his newly recognised SMART Sustainability Modelling for project and business management.

He was appointed a Professor of Project Management at the University of Business and Technology, Jeddah, Kingdom of Saudi Arabia which was a culmination of his work in training and consulting in the region on matters that relate to project management, supply chain management and sustainability modelling. Having previously held the position of a specialist Sustainability Management Global Advisor he has moved forward from that position and now regularly supports businesses and projects alike in streamlining their approaches to change and strategic development providing greater longevity in their business planning.

Having started his career in the Royal Air Force, Mark has continued to develop by working and delivering projects in multiple fields of industry ranging from the nuclear environment, into pharmaceuticals, finance and also the international sporting fields.

Mark has developed his role within project management through further experience with the nuclear industry and is now the owner of M R Project Solutions Limited where he has fulfilled the role of Project Management Advisor for the last three and a half years covering every continent. His role is very much client facing and Mark now almost permanently travels the world meeting clients, developing solutions and providing training for their project families either directly through his own organisation or in support of others. Mark's main role is the development and the consultation with many organisations on ensuring they choose the right approach or methodology to deliver their projects and then follows this up with the correct bespoke training programmes for how their company wants to share this learning with their staff members.

Mark has changed the approach to learning by the ongoing development of his original 'Living Learning' programme by introducing a new learning experience for all taking the classroom format and making it come to life with his popular and original 'Applied Learning' simulation training and coaching technique. He has taken this forward over the past few years to

introduce this training style so that project management learning and behaviour has now started to be delivered into the schools and colleges looking to develop the technical, behavioural and contextual skills and attitudes of their students.

As a regular public speaker Mark now shares his experience, knowledge and commitment with those associations wanting to move forward in a more sustainable and successful manner. Mark's next aim is to develop this further and to spread project management knowledge and competency to many more organisations worldwide, having already started with successful deliveries globally.

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