DSBL Capstone

# Step 0 - Introduction. 100-day Data Science Plan: Build a Data Science Strategy

Upon assuming a new leadership role within a company (whether from an internal move or joining the company anew), it is common for an executive to be asked to prepare a plan for their first 100 days in the job.

As part of this project, you will build/create the following:

1. Identification of six data science opportunities for the organization
   1. Opportunities must be spread across three different functional areas
   2. Detail the risks, challenges, and key factors for success for each of these opportunities
2. Prepare a roadmap for executing these six data science opportunities.
   1. Rack and stack evaluation of these opportunities
3. Prepare a Human Capital plan for your data science organization
4. Prepare a Technical plan for your data science organization
   1. Data and Data Architecture Strategy
   2. Machine Learning Architecture

The work product for this Capstone project will be a detailed presentation to the CEO, detailing your plan and the rationale behind your decisions.

This project asks you to prepare that 100-day data science plan for a company of your choosing; this could be your current company or some other existing company.

**Name of Company Chosen:** KACST

**Brief Company Description:** KACST is the National Lab of Saudi Arabia, with a greater focus on l research value chain, facilitating the commercialization of research and translation to industry providers of national RDI facilities and programs.

KACST is an enabler of the RDI ecosystem. It bridges the gap in KSA as an innovation enabler, becoming the national RDI engine and focusing on applied research to catalyze social and economic innovation.

KACST's mandate is to develop, localize, and commercialize technology and services through multi-disciplinary applied scientific research for socio-economic advancement and to foster innovation and entrepreneurship by creating a collaborative, supportive ecosystem of specialized tenants, furthering the growth of a specific technical field

Step 1 - Identify Data Science Opportunities in the Business

Throughout the course, you have been exposed to multiple examples of data science projects implemented in a business setting. Now, based on your knowledge of your specific business context, you will generate six potential projects to be considered by the executive leadership team. These projects must span three unique functional areas of the business, with any one functional area representing no more than 3 projects:

Acceptable Project Mixes

\* 2 marketing + 2 supply chain + 2 finance

\* 2 marketing + 1 human resources + 1 procurement + 1 product + 1 manufacturing

\* 3 finance + 1 legal + 2 marketing

Unacceptable Project Mixes:

\* 3 marketing + 3 finance

\* 4 marketing + 1 product + 1 manufacturing

**Please identify your six projects here:**

**Project 1:** Research and development project prediction machine learning (Finance)

**Project 2:** Customer segmentation (Marketing)

**Project 3** Infrastructure utilization dashboard (Operation)

**Project 4:** Customer services enhancement (Operation)

**Project 5:** Lab's demand forecasting (Supply chain)

**Project 6:** HR chatbot (HR)

**Note: You may choose to represent this information on slide 5 of the CEO Presentation Template**

**For each candidate project, please provide the following detail:**

**Project 1 Name:** Research and development project prediction machine learning.

**Business Functional Area:** Finance.

**1. Description of the project (including business problem to be addressed, how data science will address that business problem, and the targeted business objective (revenue? customer acquisition? cost reduction?):**

- Business Problem Addressed: Researchers apply for a fund and grant, having different risks. KACST needs an efficient system for determining the cost of R&D products and achieving efficient technology transfer, commercialization, and market launch of R&D products.

- Role of data science in addressing the business problem:

Predict high-impact R&D projects in an automated way that increases profitability, decreases evaluation time, increases efficacity, and achieves related KPIs & OKRs.

- Targeted business objective(s):

* Reduce the load of the committee assessing each fund request.
* Decrease evaluation time.
* Increase the processed fund request number.

**2. Data Science Classification**

- Approach: Develop a machine learning model to help decision-makers to predicts the readiness assessment of R&D products, funds needed, and the cost of R&D for researchers' application.

- Type of Model: Predictive - supervised learning

**3. Data needed for project and sources for that data**

* Researcher data (researcher performance, number of publications and output, quality of publications, Normalized Citation Impact (NCI). number of launched R&D products, previous researcher application status).
* Technology Readiness Level TRL assessment (TRL score, level, potential customer).
* R&D estimated funds and risk profile.
* KACST research output database.
* IP value assessment.

**4. Magnitude of opportunity (with justification)**

**Magnitude:** High

**Justification:**

* It is linked to KACST OKRs: "conduct globally recognized research & development"
* It is linked to KACST's KPIs, "Derive 10%+ of commissioned research revenues from R&D products"
* It is linked to KACST's KPIs, " Publication impact and quality".
* It is linked to KACST's KPIs, "Publish 150+ peer-reviewed publication equivalents annually".
* It is linked to KACST's KPIs, "Generate 6+ IP filings from science technology park STP tenants annually."
* Increase revenues from commercialization.

**5. Cost and complexity of development and implementation**

**Cost =** 5 All required data is available, but it needs an ETL pipeline.

**Complexity of development:** 5

**6. Likelihood of value capture (Low/Medium/High) with justification**

**Likelihood of value capture:** High 5

**Justification:** It has a direct impact on revenue and achieving OKRs and KPIs of KACST.

**7. Key Business Stakeholders**

CEO, Senior VP of Research & Development, VP of Business Development & Commercialization

**For each candidate project, please provide the following detail:**

**Project 2 Name:** Customer segmentation

**Business Functional Area:** Marketing

**1. Description of the project (including business problem to be addressed, how data science will address that business problem, and the targeted business objective (revenue? customer acquisition? cost reduction?):**

- Business Problem Addressed:

Segment KACST customers B2B/B2C (RDI researchers, universities, government, semi-government, SMEs, entrepreneurs. Etc..) using clustering techniques for efficient marketing and cross-selling.

- Role of data science in addressing the business problem:

Cluster the KACST customers (RDI researchers, universities, government, semi-government, SMEs, entrepreneurs. etc..) into diverse segments. Define KACST customer personas. This allows KACST to Comprehend customer needs and offer service recommendations. Decrease inefficient marketing costs. Which increases customer retention and increase profitability.

- Targeted business objective(s):

* Increase profits.
* Decrease marketing costs.
* Make the marketing process more efficient.
* Improve marketing ROI

**2. Data Science Classification**

- Approach: Classifying similar customers into the same segment based on the chosen parameters to target them efficiently with the right services, messages, etc.

- Type of Model: Descriptive - Unsupervised (Clustering)

**3. Data needed for project and sources for that data**

* Data about RDI researchers, universities, government, semi-government, SMEs, and entrepreneurs. Etc..)
* Historical transactions from ERP system
* Data about KACST customers, such as customer name, service, price, customer acquisition cost, client satisfaction, retention rate, and net profit

**4. Magnitude of opportunity (with justification)**

**Magnitude:** High

**Justification:**

* It is linked to KACST's KPIs, "Ensure external users account for 30%+ of all of KACST’s national laboratories users annually."
* It is linked to KACST's KPIs, " Ensure international users account for at least 10%+ of all external users of KACST’s national laboratories annually."
* It is linked to KACST's KPIs, "Generate 3%+ of annual revenue from services provided."
* It is linked to KACST's KPIs, "Generate SAR 170+mn in revenues annually from science technology park STP."
* It is linked to KACST's KPIs, "Achieve an occupancy rate of 70%+ within the first 3 years of operation".
* Enhance the marketing campaigns.
* Enhance marketing hit rate.
* Positive impact on revenue.

**5. Cost and complexity of development and implementation**

**Cost =** 2 required data needed to be prepared & KACST doesn't have a data pool for the data needed.

**Complexity of development:** 3 There are some governance restriction rules for the use of customer data.

**6. Likelihood of value capture (Low/Medium/High) with justification**

**Likelihood of value capture:** Medium 3

**Justification:** It positively impacts operational expenditure. It may help in achieving the OKRs and KPIs of KACST if the project archives its objective.

**7. Key Business Stakeholders**

Senior VP of Research & Development, Senior VP of Science Technology Park, VP of Business Development & Commercialization, VP of Digital Transformation.

**For each candidate project, please provide the following detail:**

**Project 3 Name:** Infrastructure utilization dashboard

**Business Functional Area:** Operation

**1. Description of the project (including business problem to be addressed, how data science will address that business problem, and the targeted business objective (revenue? customer acquisition? cost reduction?):**

- Business Problem Addressed:

KACST is the national lab for KSA and has a vast infrastructure consisting of 10 national labs and 100 small-medium labs. KACST needs an Infrastructure utilization dashboard, A Data-driven dashboard for transparency and accountability to reduce operational expenditure, increase utilization, get insight and empower decisions.

- Role of data science in addressing the business problem:

Get insight and empower Operational, Strategic, and Analytical decisions such as infrastructure spend vs. plan, Mean time between failures, RPO, Lab instruments downtime and uptime, and Infrastructure service value scores.

- Targeted business objective(s):

* Increase and optimize utilization of existing research infrastructure on KACST premises.
* Decrease operational expenditure costs.
* Increase infrastructure ROI

**2. Data Science Classification**

- Approach:

Manage all the infrastructure information of KACST from strategic, operational, and analytical perspectives. The dashboard helps decision-makers with long-term strategies, high-level KPIs, and OKRs; also monitors operational processes. Moreover, have extensive amounts of data built by analysts.

- Type of Model: Descriptive

**3. Data needed for project and sources for that data**

* Data from Lab information management system LIMS.
* Historical data from ERP system.
* KACST research output database.

**4. Magnitude of opportunity (with justification)**

**Magnitude:** High

**Justification:**

1. It will monitor KACST's KPIs & OKRs related to infrastructure utilization.
2. It is linked to KACST's KPIs, "Achieve a minimum national laboratory (labs with open access only) utilization rate of 70%+ annually".
3. It will help to manage national facilities and ensure high utilization from both internal and external stakeholders.

**5. Cost and complexity of development and implementation**

**Cost =** 5 All required data needed are available.

**Complexity of development:** 4

**6. Likelihood of value capture (Low/Medium/High) with justification**

**Likelihood of value capture:** High 5

**Justification:** It positively impacts operational expenditure. It may help in achieving the OKRs and KPIs of KACST.

**7. Key Business Stakeholders**

VP of Business Development & Commercialization, VP of Digital Transformation, VP of Support Services, VP of Strategy & Planning.

**For each candidate project, please provide the following detail:**

**Project 4 Name:** Customer services enhancement

**Business Functional Area:** Operation

**1. Description of the project (including business problem to be addressed, how data science will address that business problem, and the targeted business objective (revenue? customer acquisition? cost reduction?):**

- Business Problem Addressed:

KACST is the national lab for KSA and will serve customers such as (RDI researchers, universities, government, semi-government, SMEs, and entrepreneurs. Etc..). KACST needs to use data science to Improve customer services to boost its customer experience and offer maximum customer satisfaction.

- Role of data science in addressing the business problem: [Place answer here]

Improve customer services to help KACST grow in revenue generation substantially and achieve related KPIs & OKRs by collecting, tracking, and analyzing data to give KACST's customers a consistently high-quality experience.

- Targeted business objective(s):

* Decrease Customer Churn Rate.
* Increase Customer Engagement Score.
* Increase Customer satisfaction score (CSAT).
* Improve customer services.

**2. Data Science Classification**

- Approach: Predictive - Develop a machine learning model to help KACST to Improve customer services and experience.

- Type of Model: Supervised (Classification)

**3. Data needed for project and sources for that data**

* Data from Lab information management system LIMS.
* Historical data from ERP system.
* Data about RDI researchers, universities, government, semi-government, SMEs, and entrepreneurs. Etc..)
* Data about KACST customers, such as customer name, service, price, customer acquisition cost, client satisfaction, retention rate, and net profit.

**4. Magnitude of opportunity (with justification)**

**Magnitude:** medium

**Justification:**

* It is linked to KACST's KPIs, "Ensure external users account for 30%+ of all of KACST’s national laboratories users annually."
* It is linked to KACST's KPIs, "Generate SAR 170+mn in revenues annually from science technology park STP."
* It is linked to KACST's KPIs, "Achieve an occupancy rate of 70%+ within the first 3 years of operation".
* Positive impact on revenue.

**5. Cost and complexity of development and implementation**

**Cost =** 2 required data needed to be prepared & KACST doesn't have a data pool for the data needed.

**Complexity of development:** 2

**6. Likelihood of value capture (Low/Medium/High) with justification**

**Likelihood of value capture:**  2

**Justification:** need to develop the algorithm, and some data need to be prepared.

**7. Key Business Stakeholders**

Senior VP of Research & Development, Senior VP of Science Technology Park, VP of Business Development & Commercialization, VP of Digital Transformation.

**For each candidate project, please provide the following detail:**

**Project 5 Name:** Lab's demand forecasting

**Business Functional Area:** Supply chain

**1. Description of the project (including business problem to be addressed, how data science will address that business problem, and the targeted business objective (revenue? customer acquisition? cost reduction?):**

- Business Problem Addressed:

Procurement research and development goods and services are very time-consuming and may take 2 to 6 months to be concluded to procure essential RDI goods and services. KACST needs a demand forecasting project to anticipate labs' supply chain needs.

- Role of data science in addressing the business problem: [Place answer here]

Improve KACST supply chain by forecasting labs' R&D materials needs before sufficient time for ordering.

- Targeted business objective(s): [Place answer here]

* Decrease operational expenditure costs.
* Improve customer services.
* Increase and optimize utilization of existing research infrastructure on KACST premises.
* Increase infrastructure ROI.
* Increase profits.
* Decrease evaluation lab downtime.
* Decrease the time of the supply chain process.

**2. Data Science Classification**

- Approach: Predicting probable future demand.

- Type of Model: Supervised (Regression)

**3. Data needed for project and sources for that data**

* Data from Lab information management system LIMS.
* Historical data from ERP system.
* Data about RDI researchers, universities, government, semi-government, SMEs, and entrepreneurs. Etc..)
* Data about KACST customers, such as customer name, service, price, and order rate.

**4. Magnitude of opportunity (with justification)**

**Magnitude:** High

**Justification:**

* Positive impact on revenue.
* Decrease operational expenditure costs.
* Increase infrastructure utilization.
* It will help manage national facilities and ensure high utilization from internal and external stakeholders.

**5. Cost and complexity of development and implementation**

**Cost =** 2 required data needed to be prepared & KACST doesn't have a data pool for the data needed.

**Complexity of development:** 2

**6. Likelihood of value capture (Low/Medium/High) with justification**

**Likelihood of value capture:**  4

**Justification:** It positively impacts operational expenditure and R&D project time.

**7. Key Business Stakeholders**

Senior VP of Research & Development, VP of Support Services, VP of Business Development & Commercialization, VP of Digital Transformation, and GM of Digital Smart Labs.

**For each candidate project, please provide the following detail:**

**Project 6 Name:** HR chatbot

**Business Functional Area:** Human Resource

**1. Description of the project (including business problem to be addressed, how data science will address that business problem, and the targeted business objective (revenue? customer acquisition? cost reduction?):**

- Business Problem Addressed:

KACST is in the process of managing change to reflect the new mandate, and one of the main changes is the new organizational structure, position, and salary. KACST needs a new, smart way to engage with employees.

- Role of data science in addressing the business problem: [Place answer here]

Facilitating HR support with digital assistants to handle employee inquiries and improve the employee experience.

- Targeted business objective(s):

* Reduce the HR load of employee inquiries.
* Decrease response time.
* Improve employee services.
* Improve employee services.

**2. Data Science Classification**

- Approach: Supervised - Deep Learning.

- Type of Model: Natural Language Processing is used to assess each employee's needs and respond to that needs automatically.

**3. Data needed for project and sources for that data**

* Data from ERP system.

**4. Magnitude of opportunity (with justification)**

**Magnitude:** High

**Justification:**

* It is aligned with the strategic goals of KACST.
* It will facilitate the smooth implementation change management program to ensure the successful execution
* It will generate momentum.

**5. Cost and complexity of development and implementation**

**Cost =** 1 required data needed to be prepared & KACST doesn't have a data pool for the data needed.

**Complexity of development:** 2

**6. Likelihood of value capture (Low/Medium/High) with justification**

**Likelihood of value capture:**  4

**Justification:** It positively impacts the change management program and KACST transition.

**7. Key Business Stakeholders**

VP of Support Services, VP of Digital Transformation

# Step 2 - Developing a Roadmap: Prioritizing Data Science Opportunities in the Business

A strategic approach to data science requires the business to consider the relative opportunities, costs, and risks of potential projects to identify the best order to carry out the projects. What should be tackled first? What is best pushed off until later? Completing the Data Science Roadmap requires stepping through key considerations to determine which project(s) should be considered ‘top priority’ and at what pace these and subsequent projects should be initiated.

**1. Complete this “Rack and Stack Exercise” worksheet to determine the relative strategic alignment, cost, complexity of implementation, certainty of value capture, and magnitude of benefit for each of the six projects**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Direct Alignment with Strategic Goals?** | **Cost** | **Complexity of Implementation** | **Certainty of Value Capture** | **Magnitude of Benefit** |
|  | 1=Low; 5=High | 1=High; 5=Low | 1=High; 5=Low | 1=Low; 5=High | 1=Small; 5=Large |
| **Project 1:**  **Research and development project prediction** | 5 | 5 | 5 | 5 | 5 |
| **Project 2:**  **Customer segmentation** | 5 | 2 | 3 | 3 | 5 |
| **Project 3:**  **Infrastructure utilization dashboard** | 5 | 5 | 4 | 5 | 5 |
| **Project 4:**  **Customer services enhancement** | 4 | 2 | 2 | 2 | 3 |
| **Project 5:**  **Lab's demand forecasting** | 3 | 2 | 2 | 4 | 5 |
| **Project 6:**  **HR chatbot** | 4 | 1 | 2 | 4 | 4 |

**Note: You may choose to represent this information on slide 8 of the CEO Presentation Template**

**Please complete Step 2, Part 2, the Data Science Opportunity Matrix, using slide 1 of the CEO Presentation Template (You may or may not decide to include this slide as part of your CEO presentation)**

**Step 2, Part 3: Complete the table below by referencing the first four data science projects chosen for implementation. Include your justification for each project's order of implementation (e.g., how will the third project benefit from being implemented after the completion of the first two projects?)**

|  |  |  |
| --- | --- | --- |
| **Project Order** | **Project Title** | **Order Justification** |
| 1 | Research and development project prediction | The project has the highest impact among other projects and have a positive impact on revenues and achieving KACST KPIs & OKRs |
| 2 | Infrastructure utilization dashboard | This project will help to utilize KACST Infrastructure which are the one of the main pillars of KACST strategy to increase revenue and reduce operational expenditure. |
| 3 | Customer segmentation | It is best to implement this project after the second project (the infrastructure utilization dashboard) since decision-makers get insight that helps them empower operational, strategic, and analytical decisions that maximize the utilization and prepare the optimum infrastructure. After that, it is time to focus on marketing, improving customer needs, and offering service recommendations. |
| 4 | Lab's demand forecasting | Since the previous projects focused on finance, operation, and marketing, this project which focused on the supply chain will be implemented after finishing them to get the most benefit from it. |

**Note: You may choose to represent this information on slides 6 and 7 of the CEO Presentation Template**

# Step 3 - Establishing a Data Science Human Capital Strategy for your Data-driven Business

Now that we have established a roadmap for carrying out data science projects, our attention must turn to building and configuring the organization we will leverage to carry out this roadmap. The Data Science Human Capital Plan completed in this step will cover the organizational structure and talent configuration best suited to carry out the business’s roadmap, as well as the activities that the organization in particular -- and business more broadly -- must complete in order to promote a data-driven culture throughout the business.

**1. Identify the organizational model best suited for the data science organization that your business will need to deliver on the roadmap completed in Step 2. Provide justification for your selection based on the needs, scope, and timing of projects to be implemented in the Data Science Roadmap. If your organization should start with one model and evolve toward a different model, you may provide that detail and justification in your response.**

**Organizational Model:** Completely Centralized data science model

**Justification:**

KACST is a government entity that must comply with National Data Management Office regulations to adhere to it easily; the preferred model is a completely centralized data science model. The team will manage all data and data science-related projects centrally and have subject matter experts with the team to share knowledge and help them to achieve the outcome of data science projects.

**2. Complete the “Human Capital Plan” Worksheet for your data science organization.**

**- Identify the first ten professional roles for which you would recruit. How would you organize these roles into teams within the organization?**

For example, if you had 4 data scientists split evenly into two teams, your response would look like this:

|  |  |  |
| --- | --- | --- |
|  | **Position** | **Team** |
| 1 | Data Scientist | 1 |
| 2 | Data Scientist | 1 |
| 3 | Data Scientist | 2 |
| 4 | Data Scientist | 2 |

Identify your roles and teams below:

|  |  |  |
| --- | --- | --- |
|  | **Position** | **Team** |
| 1 | Data Scientist hacker | 1 |
| 2 | Machine Learning Engineer | 1 |
| 3 | Data Engineer | 1 |
| 4 | Data Analyst | Floating Team |
| 5 | Data visualization Engineer | Floating Team |
| 6 | Business Intelligence Engineer | Floating Team |
| 7 | Senior Data Engineer | Floating Team |
| 8 | Data Scientist Hacker | 2 |
| 9 | Machine Learning Engineer | 2 |
| 10 | Data Engineer | 2 |

**Note: You may choose to represent this information on slide 9 of the CEO Presentation Template**

**Assume that leadership will allocate four new FTE’s for your data science organization during the current fiscal year. How would you prioritize your organizational buildout?**

|  |  |  |
| --- | --- | --- |
| **Order of Hire** | **Position** | **Justification** |
| 1 | Data Scientist hacker | The Data Science Hacker has experience with many of the technologies required for digitally transformative projects and has the mindset needed to scope out a project and help the success of projects. He will be responsible from beginning to end for all data mining projects through scoping, research, development, deployment, and monitoring. |
| 2 | Machine learning engineer | Machine learning engineer would adjust and enhance model accuracy and work on deployment. The software expertise and proficiency in machine learning help the algorithm work in the production environment. |
| 3 | Data engineer | Data engineer would set up the infrastructure by building, testing, and maintaining data pipelines |
| 4 | Data Analyst | Data Analyst analyzes data to determine KACST projects' performance using statistical techniques and provides ongoing reports to help the team. |

**Craft a “Data-Driven Transformation Strategy” by identifying six specific initiatives that you would recommend the data science organization and/or the business undertake in order to promote a data-driven culture across the business.**

|  |  |
| --- | --- |
|  | **Strategy** |
| 1 | Get buy-in and support from KACST's top management. |
| 2 | Increase KACST spending by decision-makers on data infrastructure. |
| 3 | Offer specialized training in data science to employees, such as data science courses and Excel courses, to enhance data literacy. |
| 4 | Integrate data capability into each area of KACST to transfer data knowledge and learning across KACST |
| 5 | Make data warehouses available through cloud pools for easy access to relevant stakeholders. |
| 6 | Simple proofs of concept. |

**Note: You may choose to represent this information on slide 10 of the CEO Presentation Template**

# Step 4 - Establishing the Technical Infrastructure to Support the Data Science Organization

With a completed Data Science Roadmap and a Human Capital Plan for executing the data science strategy, we turn our attention to the technological capabilities that must be built to support the new Data Science organization.

Complete the table on the next page by entering strategic aspects your business might consider to meet its Data and Data Architecture needs.

**Data and Data Architecture Strategy for the business**

|  |  |  |
| --- | --- | --- |
| **Component** | | **Strategy** |
| Data Requirements | What data should be included in the Data Strategy? | * Data from ERP system, LIMS system * Data about KACST customers * Researcher data |
| Data Governance | How will we promote data availability? (provide at least two ideas) | * Automate failover * Improve your physical infrastructure * Proactive monitoring |
| How will we promote usability? (provide at least two ideas) | * Findability and Consistency * Accuracy and Granularity * Comprehensiveness * Quality * security |
| How will we guarantee integrity? (provide at least two ideas) | * Access control (Physical security – Cybersecurity) * Validate data * Backup data * Audit |
| How will we guarantee security? (provide at least two ideas) | * Effective policy (availability of data - usability of data- quality of data - integrity of data -security of data) * Data governance roles in terms of ownership, accessibility, security, quality, and knowledge * Data governance tools include DLP, firewall, encryption, backup, UBA, DAM.etc. |
| Technology | Identify the components of your Data Architecture | * Data pipelines * Cloud storage using KACST Cloud * API’s * AI/ML Models * Cloud Computing using KACST HPC |
| Skills and Capacity | How will we promote development of data literacy skills and capacity throughout the organization (provide at least three ideas) | * Training on KACST academy (statistics, data science, excel, tools used). * Data weekly sessions to promote knowledge about data interpretation. * Make data available to all KACST employees. |
| Support for Machine Learning | Give a brief description of the machine learning architecture and how it will interface with the data architecture | * Use In-house data and machine learning architectures with KACST HPC because of KACST capability from operation and human resources perspective. * Build an In-house ML model, deploy and maintain because KACST has capability in terms of researchers in the data science field. |

**Note: You may choose to represent this information on slide 11 of the CEO Presentation Template**

# Step 5 (OPTIONAL) - Record a short video of you presenting your final slide deck to your CEO or Executive Committee (5 minutes)

You may wish to submit a short video of you presenting your final presentation to your CEO; while this is not a formal requirement for the Capstone project, it does provide an outstanding way to gain practice with communicating about data science in business contexts.