



Leveraging Data Analytics

May 30, 2019

Agenda

- Introduction
- Analytics
- Digital Transformation
- Army Chaplains Use Case



Introduction

Paul Seckar, Principal, Grant Thornton LLP

Mr. Seckar leads Grant Thornton's Decision Analytics Service Line within Public Sector. He is responsible for Analytic solutions and services ranging from data management to foundational analytics to advanced analytics across federal and state & local. Mr. Seckar has over 20 years of experience, spanning technology-based analytic solutions and applications, as well as decision analytic studies and engagements that deliver implementation recommendations for improved performance, streamlined operations, and strategic decision making.

Andreas Lucido, Senior Manager, Grant Thornton LLP





Mr. Lucido is a former Army Officer that has served in multiple Joint Task Forces and Commands. He has more than 10 years' experience in program management leading various financial management and data analytic engagements including US Army Central Command (ARCENT), Department of Army Chaplains (DACH), The Joint Staff (TJS), US Special Operations Command (USSOCOM) and US Immigration and Customs Enforcement (ICE). Mr. Lucido is a certified Project Management Professional (PMP) and Certified Defense Financial Manager (CDFM).

LTC (CH) Michael Zell, Comptroller, Army Office of the Chief of Chaplains (OCCH)

Chaplain Zell is the Comptroller for the U.S. Army OCCH responsible for Appropriated Fund operations to include program development, contracting, internal controls/audit readiness, budget preparation, and execution enabling Army-wide religious support operations. CH Zell oversees cost-modeling, program analytics and data visualization efforts in support of OCCH transformation initiatives. He has served on Active Duty since 2002 and is a graduate of the Defense Comptroller Program at Syracuse University (2011) and a Certified Defense Financial Manager (CDFM).

Data Analytics Defined

Grant Thornton LLP: Transforming raw data into intelligence for data-driven business performance

-  Actionable Insights
-  Improve performance
-  Streamline operations
-  Support strategic decision-making



Making Sense of Analytics



Predictive &
Prescriptive
Analytics



Natural
Language
Processing



Machine
Learning



Artificial
Intelligence



Statistics



Unstructured
vs. Structured
Data



Data Science

Returning to Strategy

Focus on analytic "Buzzword" techniques as appropriate, based on solution/business problem need

Analytics
Strategy

The analytic strategy is a means of realizing the business strategy.
Start with goals and objectives;
identify use cases and associated analytic solutions.

Importance of
Data Strategy

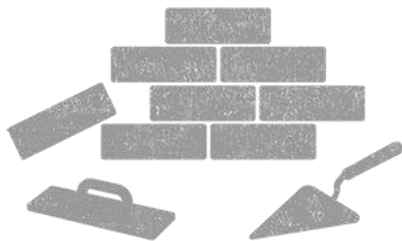
Advanced Analytic applications -
AI, ML, even intelligent automation
- rely on high-quality (master) data.
The data strategy enables the
analytics strategy.

K.I.S.S.

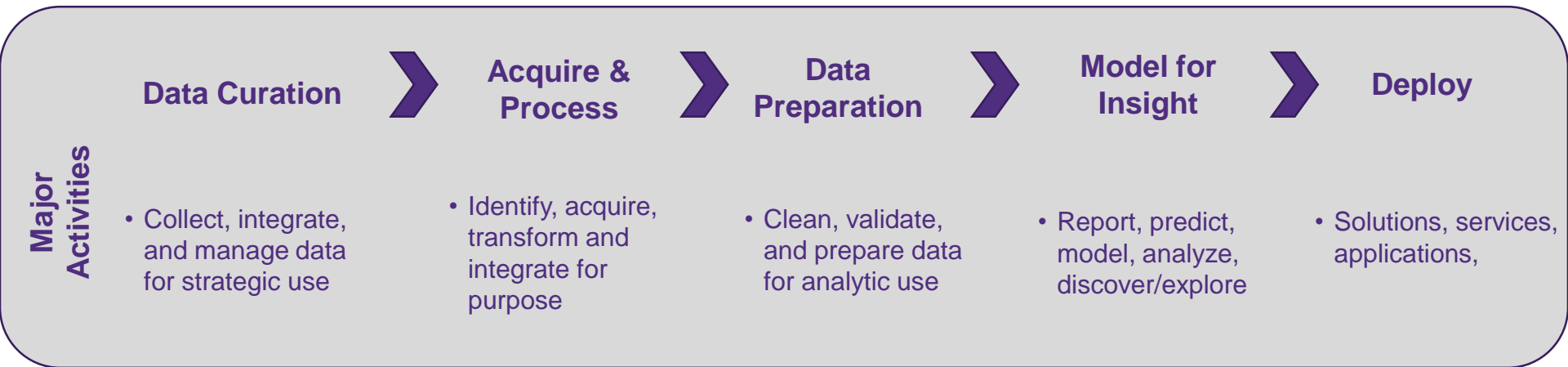
Rather than ask how to use AI or
ML, solve strategic business
problems with appropriate
analytics.

Start Small;
then Scale

Start small and build multiple agile-
based prototypes before advancing
a singular solution.



The Analytics 'Supply Chain'



Executing the analytic supply chain leads to...

Outputs

- *Data Democratization*
- *Data marketplace*
- *Self-Service Analytics*
- *Recurring Solutions*
- *Intelligent Solutions / Applications*

Outcomes

- Improved Customer Experience
- Operational Efficiency
- Data Transparency
- Strategic Decision Making
- Dynamic Insights

Enabling the Analytics Supply Chain

Options:

Centralized Teams

- Lack domain expertise and responsiveness
- Create consistency, governance, and share best practices
- Can lead to bottlenecks

De-Centralized Teams

- Domain expertise and responsiveness
- Struggle in consistency of delivery and sharing of best practices

Overall

- Most organizations do not have enough analytical skill to execute current demands
- Competitive pressure makes it difficult to retain skilled resources

Considerations:

Two-tiered organizational model - centralized team works with de-centralized teams

Build cross-functional teams blending data engineering, data science, and domain expertise

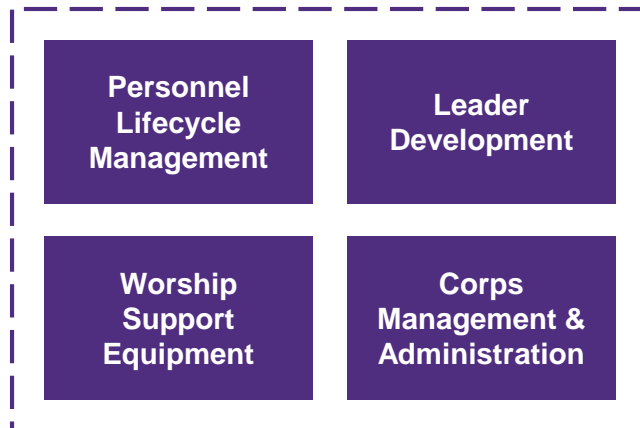
Create 'governance' to establish how teams collaborate and roles in creating & deploying 'solutions'

Army Office of the Chief of Chaplains (OCCH)

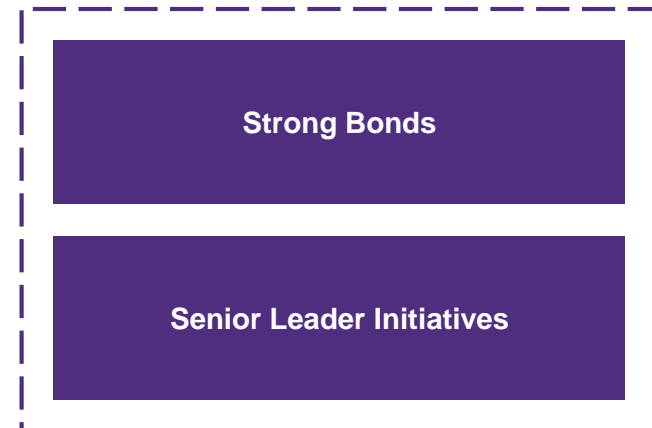
Chaplain Corps Mission

*The Army Chaplain Corps carries out the critical mission of **advising Commanders** and **providing religious support** to the global force of Soldiers accommodating the “**free exercise**” of religion. The unique mission of the Chaplain Corps is to **build Army spiritual readiness to deploy, fight, and win our nation's wars, by providing reliable and relevant world-class religious support** as a unique element of the Army...fully engaged across the full spectrum of conflict. To accomplish this mission, OCCH exercises total personnel lifecycle management and full functional proponency to generate a fully functional Chaplain Corps.*

Chaplain Base Budget (FACB)



Chaplain-Led Programs (FACC)



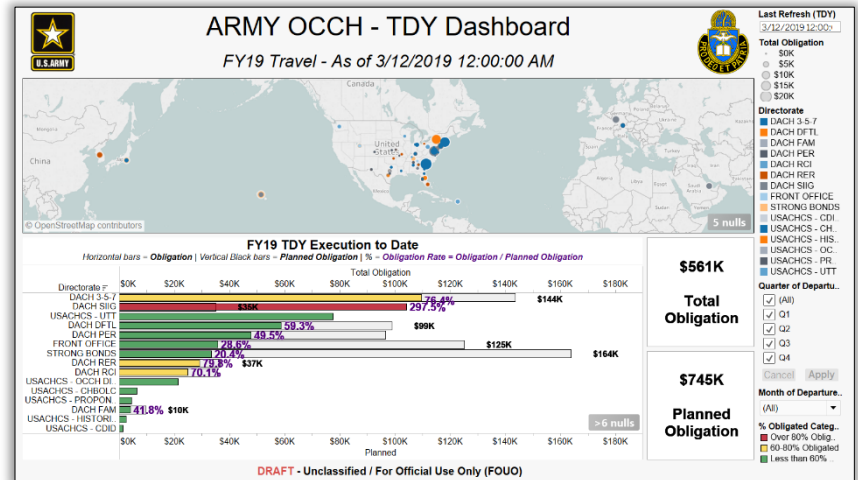
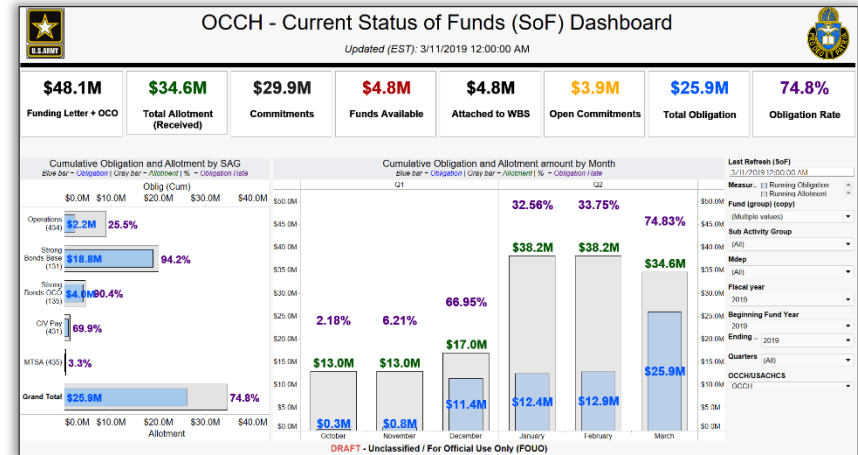
Descriptive Financial Analytics

Challenge:

- OCCH required deeper visibility of PPBE trends for POM development and the ability to capture real-time data capture of progress toward meeting execution and spend plan targets
- OCCH also required an enhanced capability to manage travel funding and TDY

Solution:

- Developed a suite of PPBE Dashboards, including budget management dashboard that provides fund execution status enabling the OCCH Comptroller and senior leaders to evaluate fiscal year-to-date of financial performance
- Dashboards allows leaders to understand the availability of funds, obligation rates compared to planned obligation, and financial metrics that ensures the organization is fiscally stable and avoiding unnecessary risk, including in high visibility areas such as Travel (Temporary Duty - TDY)
- Dashboards are semi-automated via Chaplain Data Warehouse (CDW) and Tableau Server to provide near-real time information



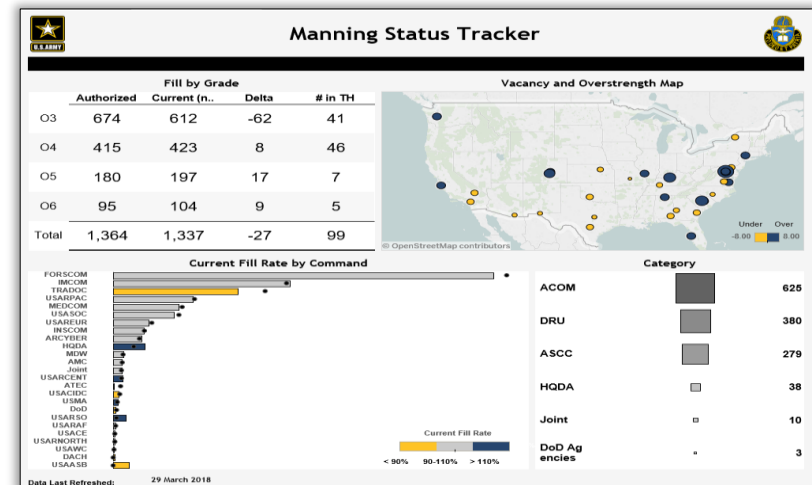
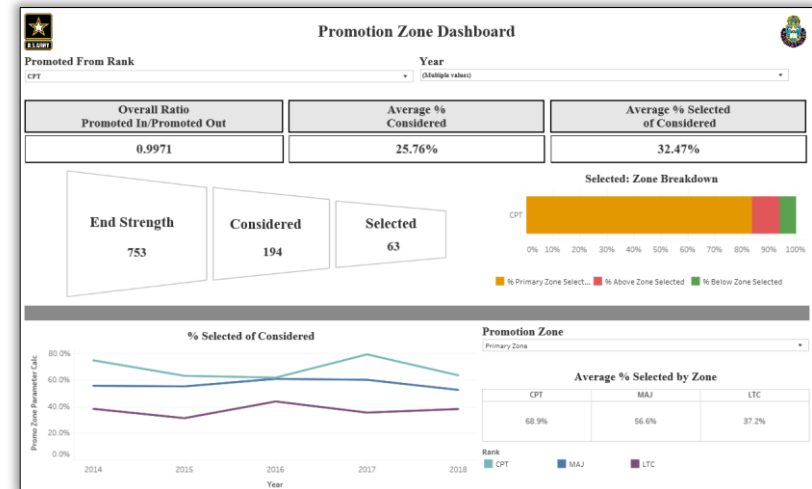
Predictive Manpower Modeling

Challenge:

- OCCH required a robust long-term strength planning capability that could assess accessions and promotions in respect to the rate of attrition and retirements
- OCCH also required a predictive staffing model to examine total personnel end strength and overall billet fill rates over a projected 5-10 year horizon

Solution:

- Developed an excel based tool and supplementary dashboard that allows for manipulation of key strength planning metrics that impacts end strength levels and supports the setting of promotion zones and overall selection opportunity for officers in grade levels Captain through Colonel
- Utilized 20 years of historical data to forecast personnel end strength and fill rates for the next 5, 10, and 20 years, using the average growth rate and standard deviation to identify high risk end strength targets which may not be achieved based on historical growth



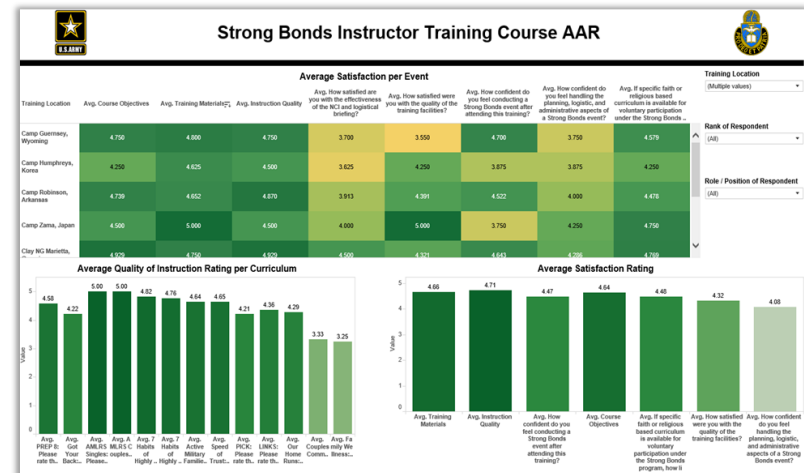
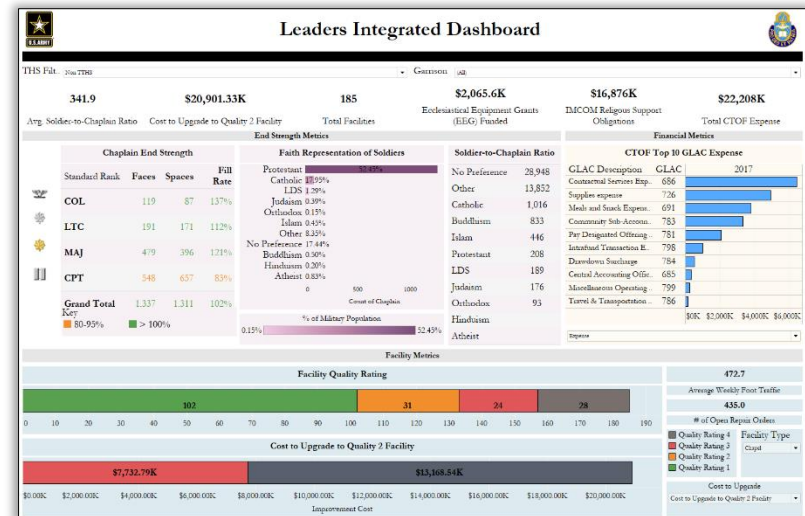
Leaders Integrated Dashboard (LID)

Challenge:

- Chief of Chaplains required overview brief from multiple staff directorates before traveling to installations
- This required staff directorates to individually brief the Chief on manning, religious demographic, facilities and religious support funding status of each location

Solution:

- Developed a SQL based Chaplain Data Warehouse (CDW) that performed a ETL process
- CDW creates a star schema data model for the purposes of analyzing metrics and benchmarks across the disparate data sets that are loaded into a cloud-based business intelligence platform for a fully integrated leader's dashboard
- GO's and Army Chaplain Leadership are able to leverage the LID identifying issues and opportunities with garrisons around the globe



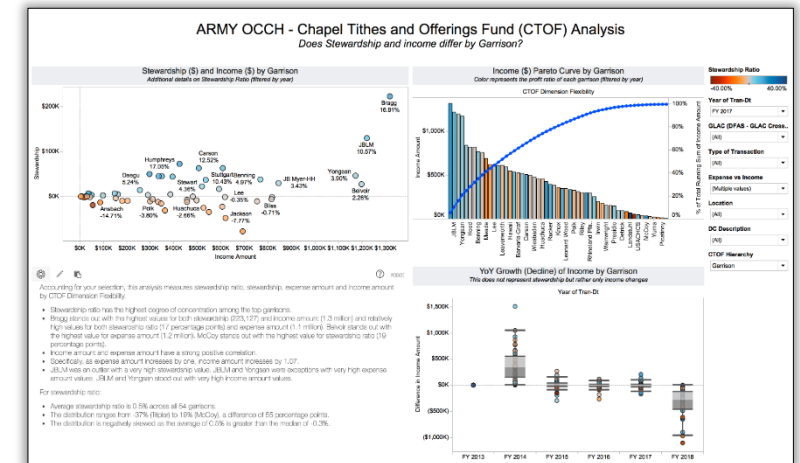
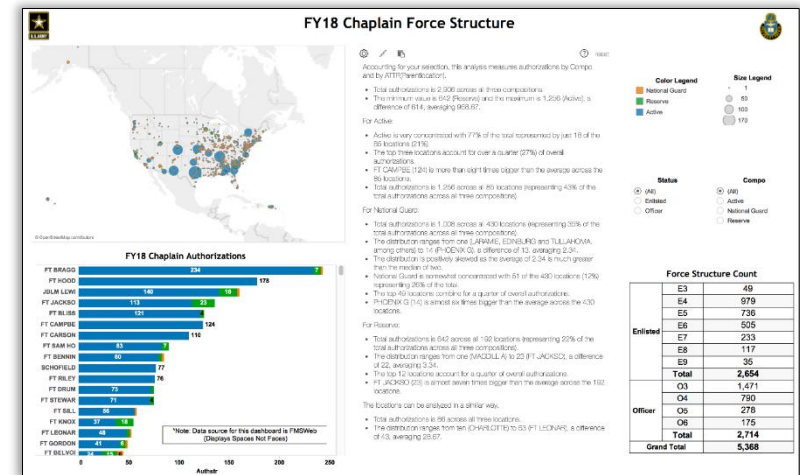
Natural Language Processing

Challenge:

- Through data capture and automation, OCCH was able to get a descriptive and predictive view of directorate requirements
- However, OCCH required quick analysis and synthesis of manpower and funding statuses for analysts review and briefings

Solution:

- OCCH piloted a natural language processing capability and forms of artificial intelligence (AI) of its suite of dashboards across its personnel and resource management directorates
- Natural Language Processing provides translates data into quick, on-hand reporting that aides in the decision making process



Final Takeaways

- ☑ Make investments in tools, technology and people
- ☑ Focus on change management
- ☑ Share data and collaborate with teams across the enterprise
- ☑ Sustain a continuous process improvement mentality
- ☑ Develop mission-driven indicators and performance metrics beyond financial measures
- ☑ Communicate results that are relevant to the organization
- ☑ Encourage leadership commitment to integrate decision-making through analytics and digital transformation