It Takes a Village:
How Data Projects Succeed*

*Or don’t

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The Use Cases

- Three different types of organizations
  - Military
  - Large corporation
  - Mid-size government agency
- First-time implementation for all of them
- Did we meet the five requirements for success?
The Five Requirements

**Buy-In**
- Goes up and down the hierarchy
- Do the people involved understand why we’re doing this?

**Urgency**
- Is there an existential threat to the business/mission if we don’t do this?

**Transparency**
- Do people both inside and outside the organization know what we’re doing and why?
- Can it be repeated?

**Non-Data Science SMEs**
- Critical, in-depth understanding of the business/mission

**Psychological Safety**
- Can members of the team trust each other?
Case Study 1: Afghanistan Corruption
The Original Mission

- Logistics unit in Kandahar called back to the Army to request support
  - Mentor program in place with ~30 day wait period
- Novice intelligence team
  - Wanted better tactical understanding
  - Understaffed for the mission
  - Augmented with volunteers from subordinate units
The New Mission

- ISAF HQ tasks us with determining corruption activities in our area
  - Unit has no organic intelligence collection assets
  - Operational area is huge
- Develop a collection program
  - Train soldiers
  - Combine new data with existing sources and analyze
- Report out and up
- Learn and train others
Did We Meet the Five Requirements?

✔ Buy-in
  • High-level leadership was supportive
  • Mid-level converted
  • Lower levels wanted to help

✔ Urgency

✔ Transparency
  • We were, but other units chose not to follow our playbook

✔ Non-data science SMEs

✔ Psychological Safety
Case Study 2: Insurance Fraud
Healthcare Insurance Fraud

• Gulf regional office knows insurance fraud is happening

• Assemble team to determine impact and mitigate future cases
  • Claims adjusters are critical to understanding current process and hypothesis development
  • Local IT understands internal systems and data for production
  • Couldn’t be managed from afar
Expansion and Spinoff Projects

• Gulf team transfers project to support Egypt office
  • Also hands information over to Mexico team
• Spinoff projects continue in Dubai
  • Monitoring doctors and hospitals
  • Group insurance pricing
  • Patient care management
  • Pre-approval process
Did We Meet the Five Requirements?

✔ Buy-in
  • Took time and pressure from US HQ
  • Started from bottom-up and outside of IT

✔ Urgency
  • Cash losses and increasingly competitive market in Middle East

✔ Transparency
  • Knowledge transfer and playbook given to other teams

✔ Non-data science SMEs
  • Claims department critical to success

✔ Psychological Safety
  • Team spent significant time together in Dubai and Cairo
Case Study 3: Commercializing Open Data
Finding a Market

• Work with cloud providers to make environmental data accessible
  • Usability of scientific data an issue
  • Will companies pay?
• Difference of opinion on strategy
  • Team thinks outreach is necessary because data releases should be market-driven
  • HQ staff thinks agency should determine what data is released
What Does Success Look Like?

- Use cases coming out that prove model works
  - Existing customers who know the data really well
  - Will this be enough?
  - Other companies waiting, but will need quite a few agency SMEs to assist with understanding data
  - Should more data be released?
Did We Meet the Five Requirements?

✘ Buy-in
  - Power struggles and mixed messaging made obtaining higher level internal buy-in very difficult

✘ Urgency
  - Agency leadership unwilling to talk about existential risks

✔ Transparency
  - Another government agency may copy this model and succeed

✔ Non-data science SMEs
  - Lots of help from agency scientists

✔ Psychological Safety
  - Egalitarian style allowed team to make decisions freely
It’s Not a Hierarchy, It’s a System

Data Project

Buy-In

Transparency

Urgency

Non-Data Science SMEs

Psychological Safety