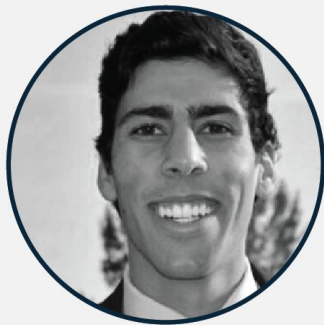# Tech and Innovation Field Lab

User Research

Kessel Run - U.S. Air Force

About Us

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KR Context

"The software factory that fights wars"

Addressing the Conflict of Cognition

Combine organic capacity and Agile methodology

Change the way the Air Force develops and deploys software

Growing Pains
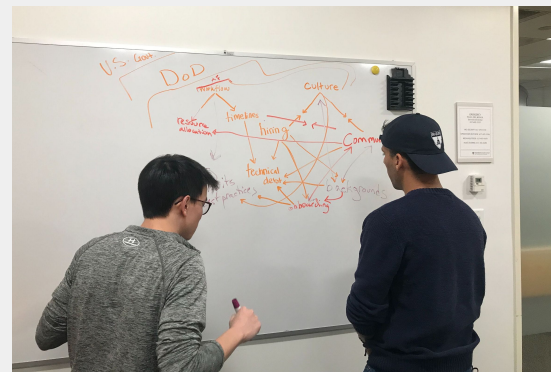
25 people became 1,200 in the course of 2.5 years

Startup is now transitioning to become a scale-up

Problem Statement Given

How can Kessel Run, the leading U.S. Air Force software factory, build and integrate new capabilities faster and better?
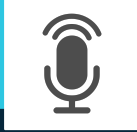
Research

Persona Summaries

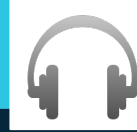*Personas reflect the perspectives of those we interviewed and the anecdotes they shared*

"Techie" in Training

Representative

Revolutionary

Grinder

Evolutionary

The "Techie" in Training

- New to tech world
  - First full-time software engineering job, recently completed technical training (pivotal, undergraduate)
  - Often uniform or contract employees
- Kessel Run & tech culture are new, still adjusting to workflows

Pain Points:
1. Documentation & standardization
2. Onboarding

The Representative

- Concerned about pace of product development and product marketing
- Manages multiple internal and external stakeholders
- External advocate of Kessel Run products

"A good day for me is when I can leave work early, knowing I've made everyone happy".

Pain Points:
1. Communication Errors
2. Unhappy clients / unsupported team members

The Revolutionary

- Excited about Kessel Run's culture and Theory of Change
  - Pro-Agile software development
- Hoping to create a culture shift within the DoD

"Kessel Run is changing the way the Air Force procures and develops software. This is the path forward, and we're leading the way".

Pain Points:
1. DoD culture slows us down

The Grinder

- A team-member largely focusing on getting products finished
- Quite grounded, and focuses on the specifics of their project at the time
- Not entirely occupied by Kessel Run's at-large pain points or culture

"I've had multiple good friends who are good engineers simply leave because they aren't being paid enough."

Pain Points:
1. Hiring Practices & Talent Retention
2. Platform Limitations

The Evolutionary
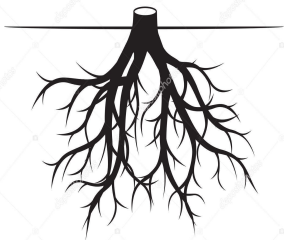
- Empathetic towards bureaucratic processes
  - Understanding about why the DoD works the way it does
- Familiar and comfortable with Kessel Run's original operating structure
- Interested in incremental change
- Adverse to radical change

"Kessel Run is already a radical change from the DoD status quo. As we continue to grow we need to take the Air Force with us, not separate ourselves from it".
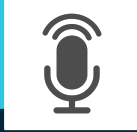
Pain Points:
1. Recognition of Active Duty Members
2. Calls for radical change

Persona Summaries

Personas reflect the perspectives of those we interviewed and the anecdotes they shared

"Techie" in Training

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Theme 1: Dependencies

Upstream / Dev

Air Ops and Wing Ops rely on Kessel Run Enterprise Services (KRES) for platform support

Downstream / Deployment

Deploying a product requires varying levels of authorization and troubleshooting

Theme 2: Culture Clash

Workflow

Agile - Iterative Development

Waterfall - Planned Development

Backgrounds

Active Military

Civilians

Contractors

Theme 3: Unclear Communication

Horizontal

Team-to-team

Cross-branch & cross- platform

App and "Story" building

Vertical

Agile is a new concept, and a new approach to change management is need

Where do we go next?

Communication errors

Platform limitations

Insufficient recognition for Active Duty military

Too many calls for radical change

Onboarding

Support clients & team members

DoD culture slows us down

Documentation & Standardization

Hiring practices & Talent Retention