

Prodacity & Outcomes in Prod

Shipping Software in the Age of AI

< /prodacity >

**A LONG
TIME AGO IN
A GALAXY
FAR,
FAR AWAY...**



Russian MoD confirms US-led Coalition's F-16, A-10 strikes on Syria

Syria ceasefire under threat after US-led strikes kill regime troops, Russia says

Earlier in the day, after a series of strikes, soldiers were killed and others were injured. Information from the Syrian command said.

The Russian Defence Ministry said that the strikes were aimed at the Syrian army's 15th division, which is fighting against the opposition in the Idlib region.

U.S. says it might target Syrian troops who are targeting ISIS

NATION/WORLD 09/17/2016, 07:00pm

Syria conflict: US air strikes 'kill dozens of government troops'

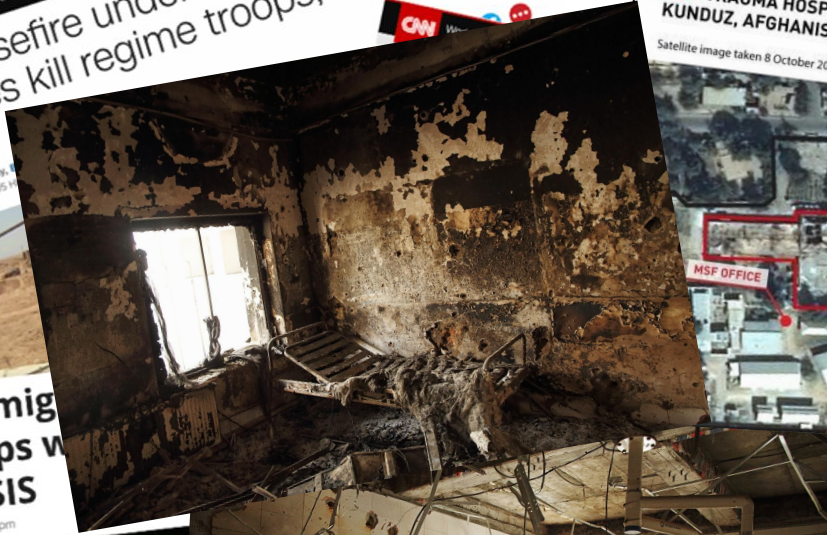
18 September 2016 Middle East



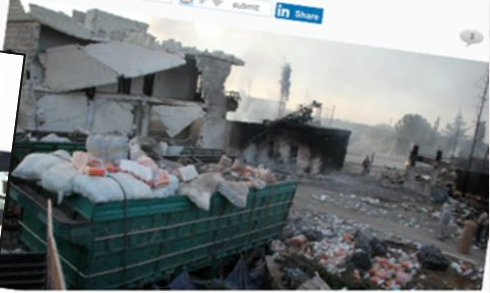
Russia Had to Call U.S. Twice to Stop Syria Airstrike

MSF TRAUMA HOSPITAL KUNDUZ, AFGHANISTAN

Satellite image taken 8 October 2015



UN opens probe into Syria aid convoy attack

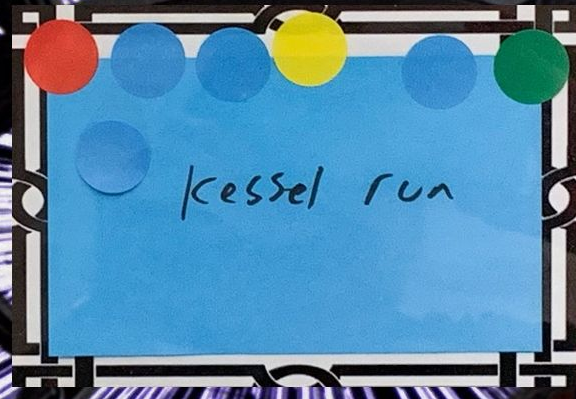


Investigations reveal civilian deaths in coalition



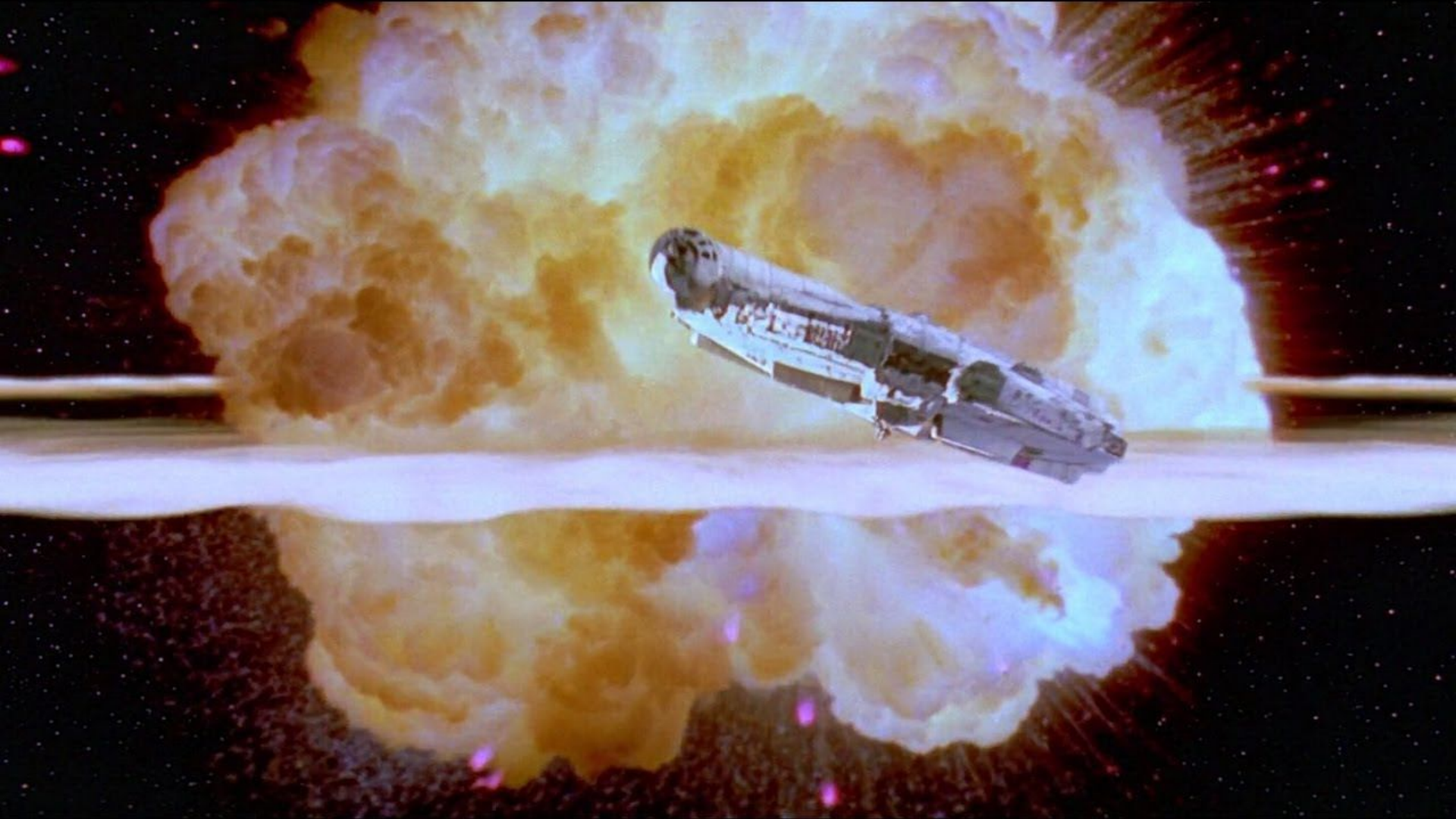
U.S. ... killed a ...

... killed a ...



A Software Factory is a combination of **people**, **process**, and **technology** and provides the ideal conditions for continuously delivering valuable software to end users with minimal waste.





How good ideas go badly wrong...

First come the innovators, who see opportunities that others don't and champion new ideas that create genuine value.

Then come the imitators, who copy what the innovators have done. Sometimes they improve on the original idea, often they tarnish it.

Last come the idiots, whose avarice undermines the very innovations they are trying to exploit.

– Warren Buffet



**YEA, IF YOU COULD JUST BUILD
ANOTHER DEATH STAR**

THAT'D BE GREAT



The background of the poster is a dark, star-filled space. In the center, the helmet of Darth Vader is prominently displayed. To the right of the helmet, the face of Yoda is visible, looking upwards with a concerned expression. Several TIE fighters are scattered around the central figures, some firing blue laser blasts. Bright, fiery explosions are visible in the upper left and upper right areas. The title text is centered in the lower half of the image.

STAR WARS

**THE EMPIRE
STRIKES BACK**

EPISODE V

prod·ac·i·ty

/prəd'asədē/

noun

1. A willingness to take bold personal risks to continuously deliver valuable software users love, to prod.
2. Having a bravery to deploy to prod that could offend others.



Redefining Our Goals

Increase Mission Capability

Mission Metric that Matters

Redefining Our Goals

Delivering software quickly, reliably, and safely is at the heart of technology transformation and organizational performance.

We see continued evidence that software speed, stability, and availability contribute to organizational performance (including profitability, productivity, and customer satisfaction). Our highest performers are twice as likely to meet or exceed their organizational performance goals.

*State of DevOps Report

Increase Mission Capability

Redefining Our Goals

Lead Time
Deployment Frequency

Speed

Mean Time To Restore
Change Fail Rate

Stability

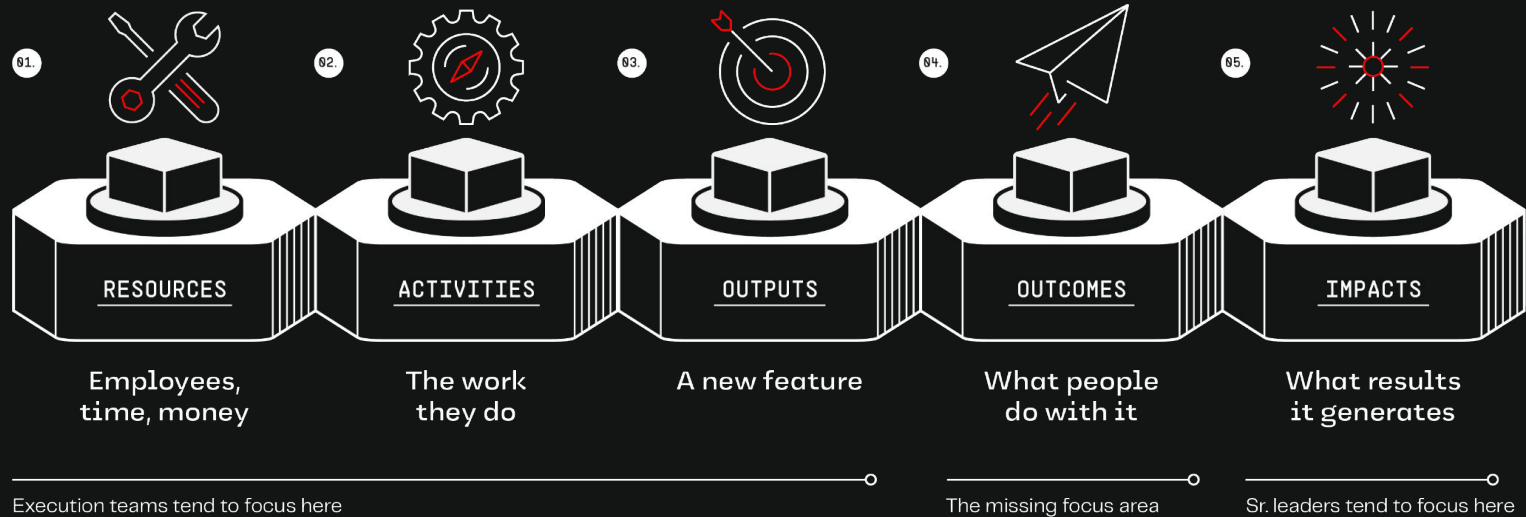
Site Reliability

Reliability

Increase Mission Capability

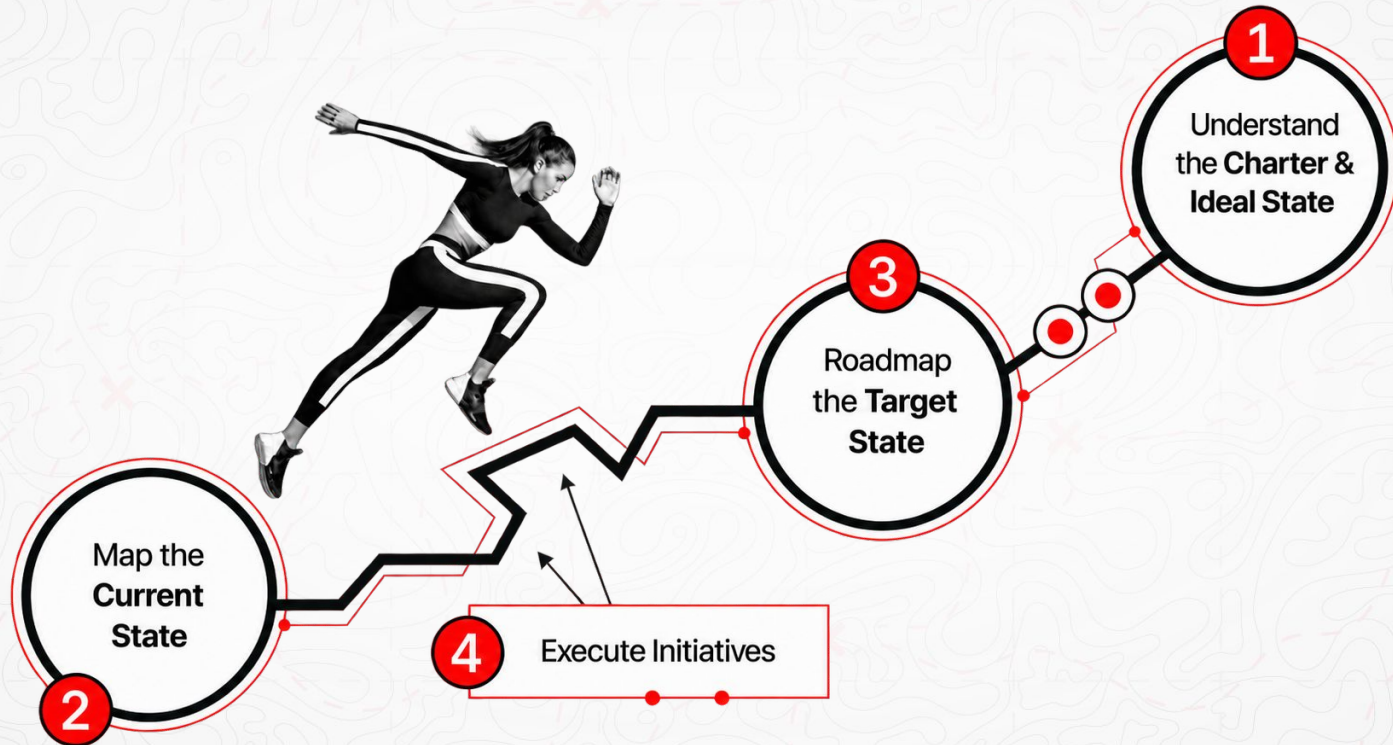
Mission Metric that Matters

The Mission Logic Model

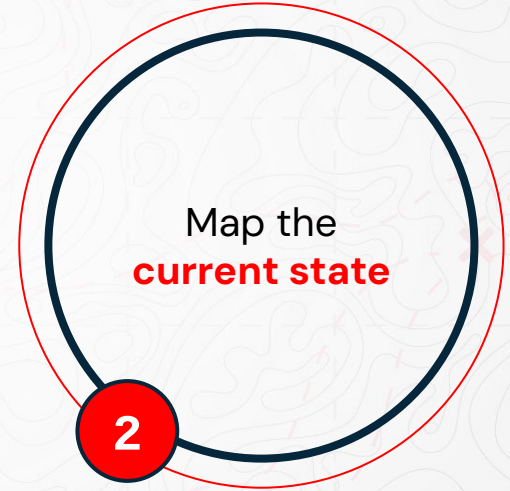
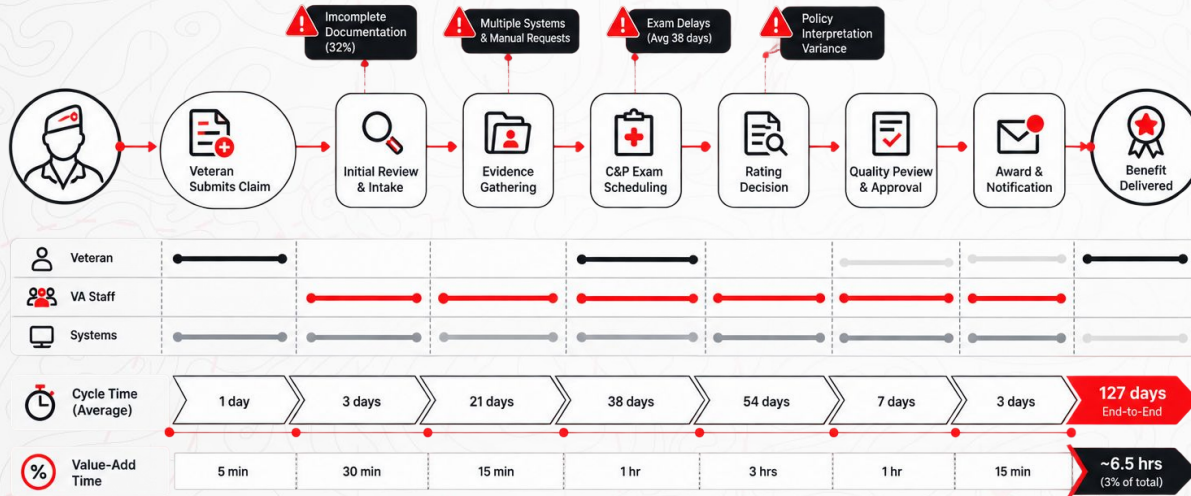


Adapted from Josh Seiden and the Kellogg Foundation

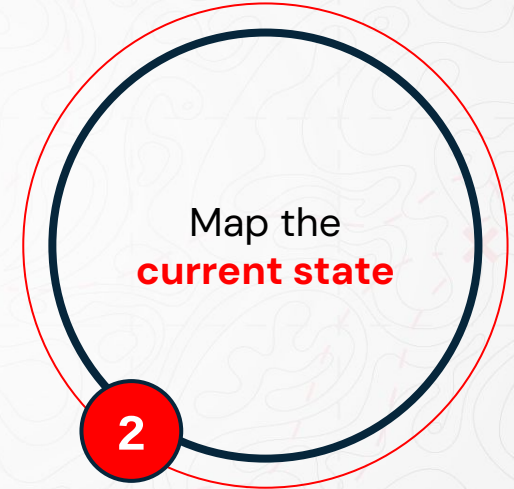
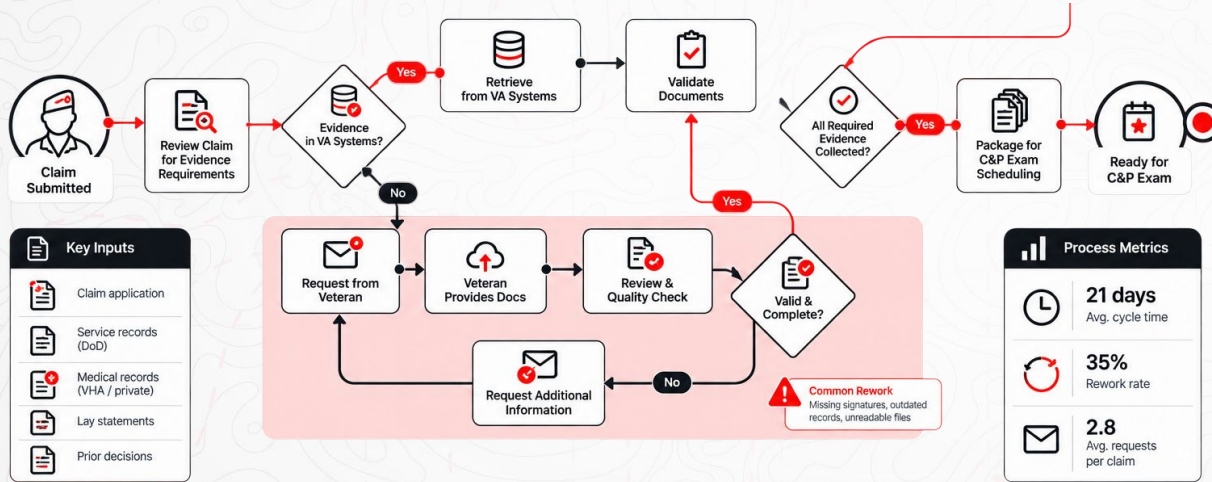
Mission Improvement Framework



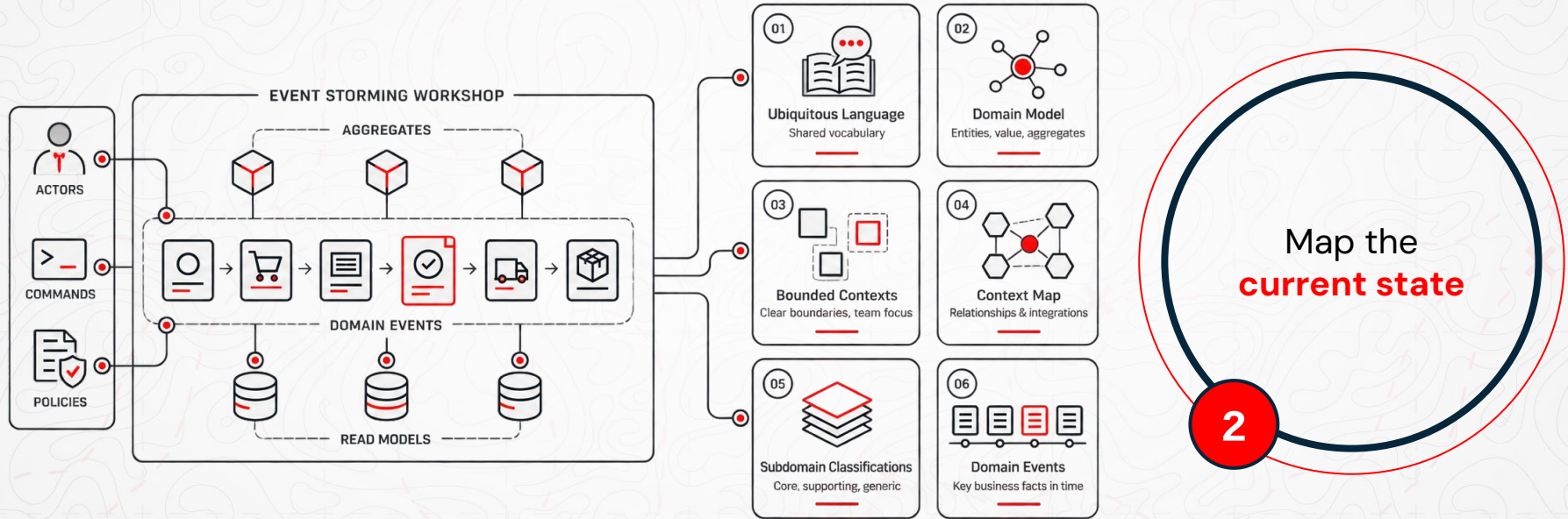
Mission Value Stream Mapping



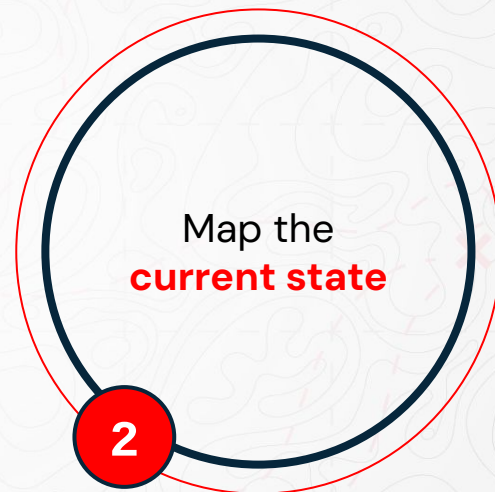
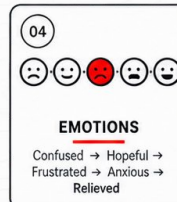
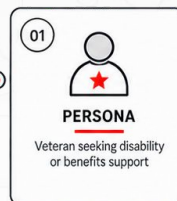
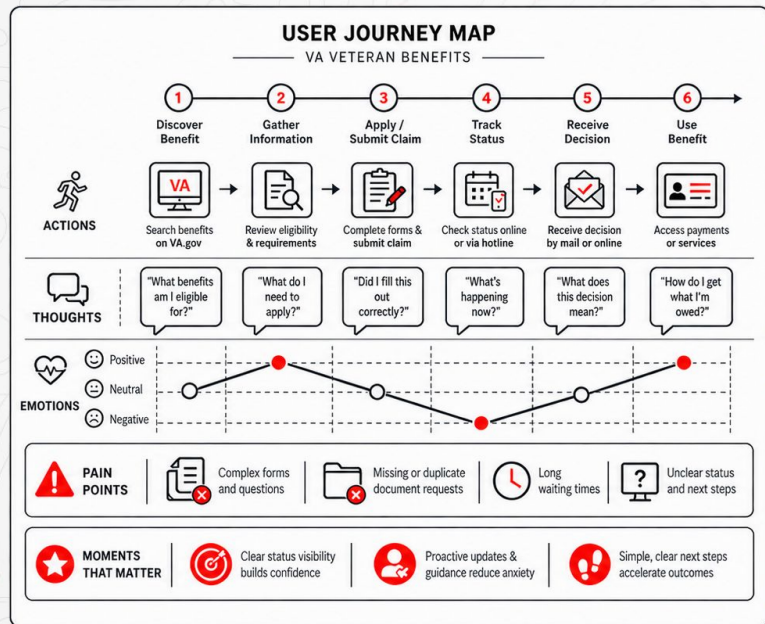
Mission Process Mapping



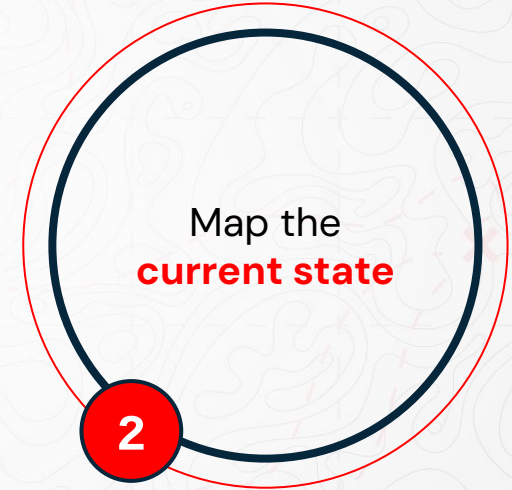
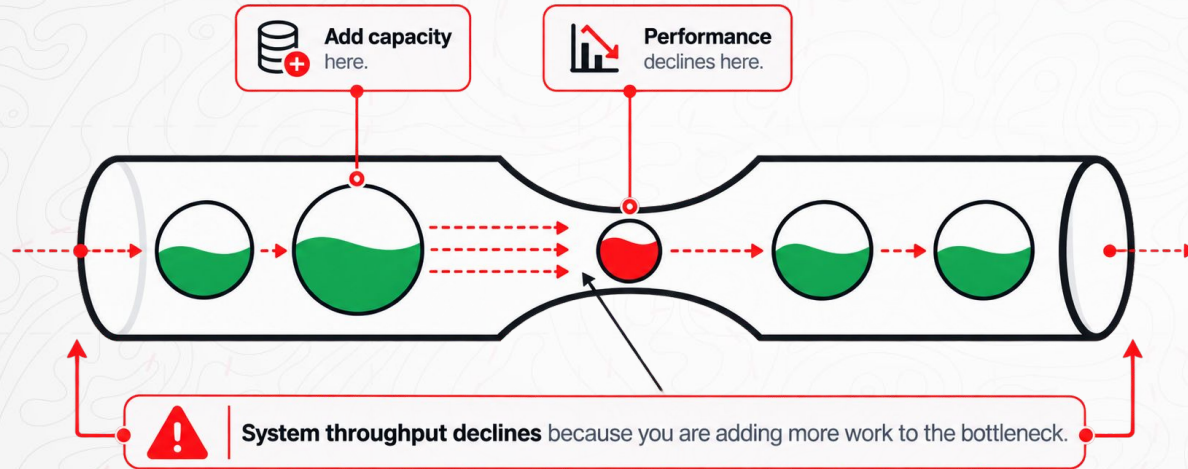
Domain Driven Design



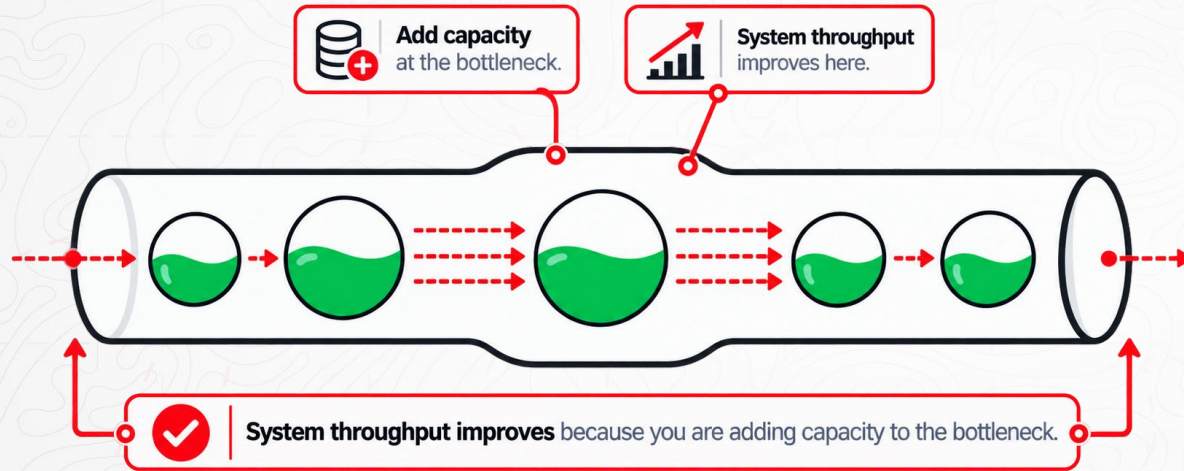
User Journey Mapping



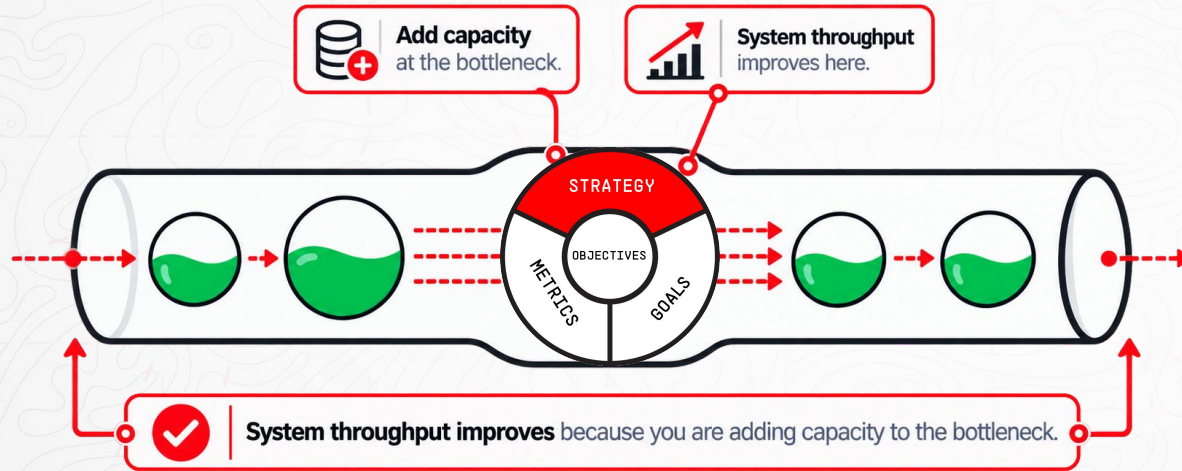
Identify the constraint



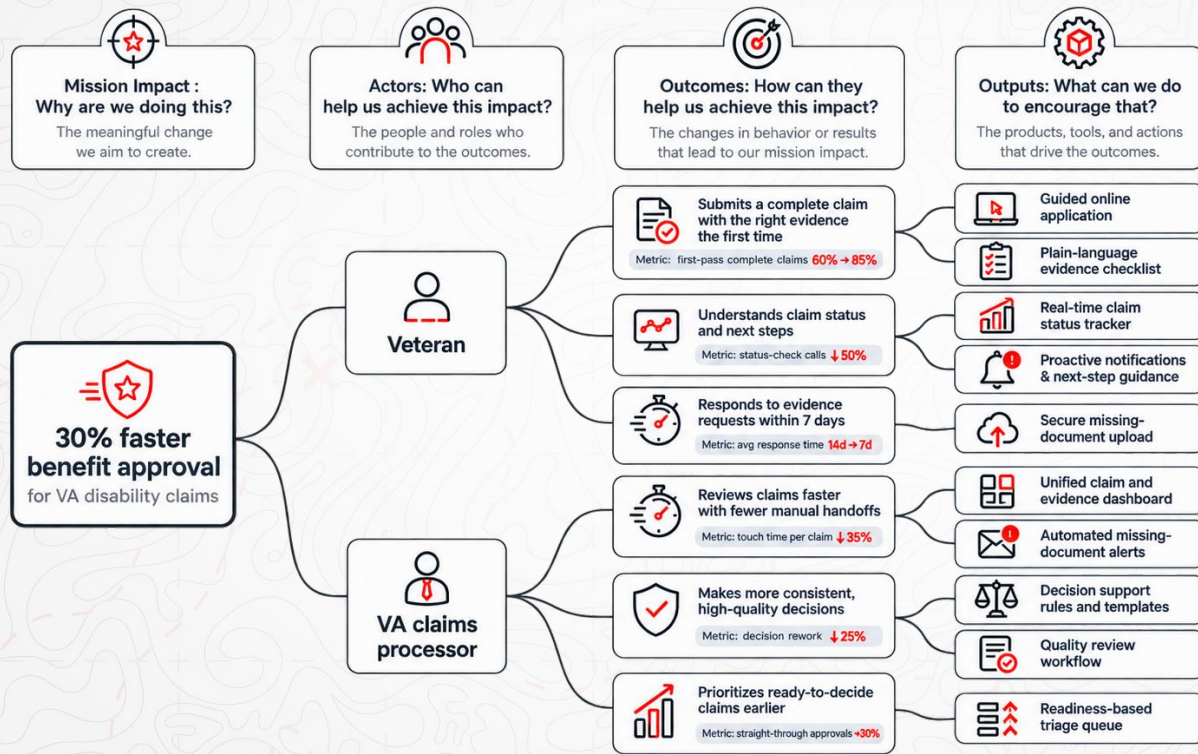
Set the Target State



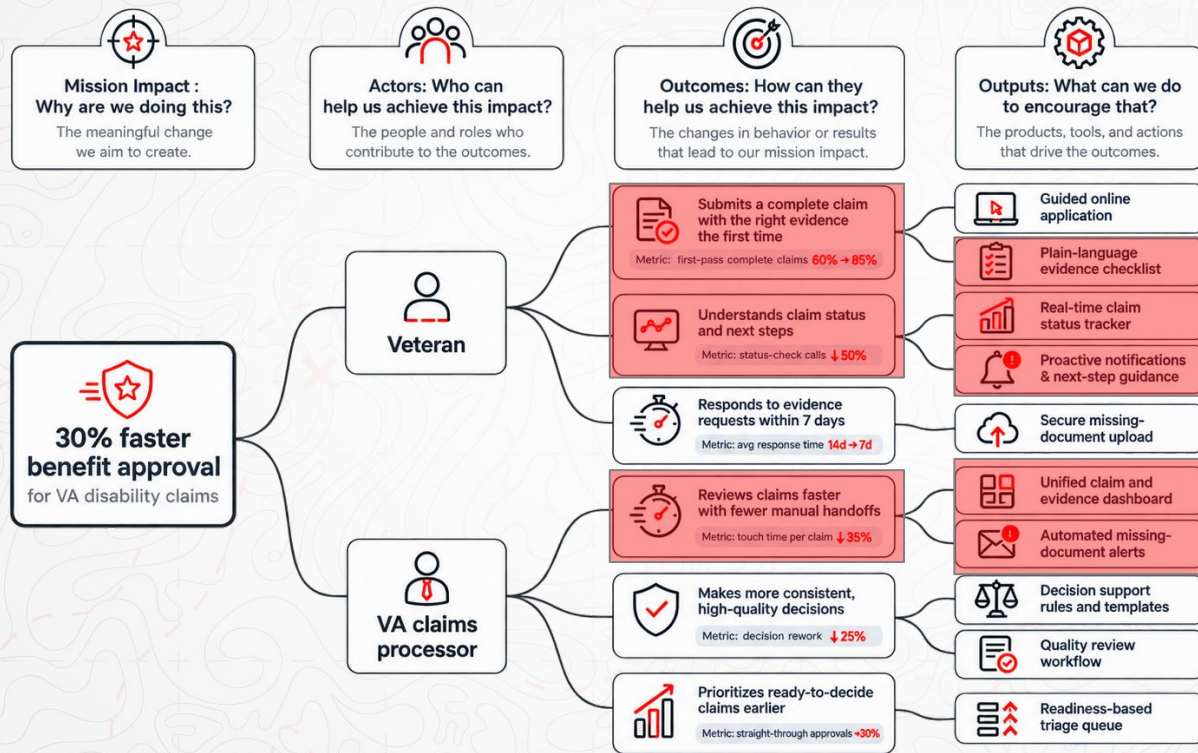
Hint: These are what your OKRs/OGSMs should be...



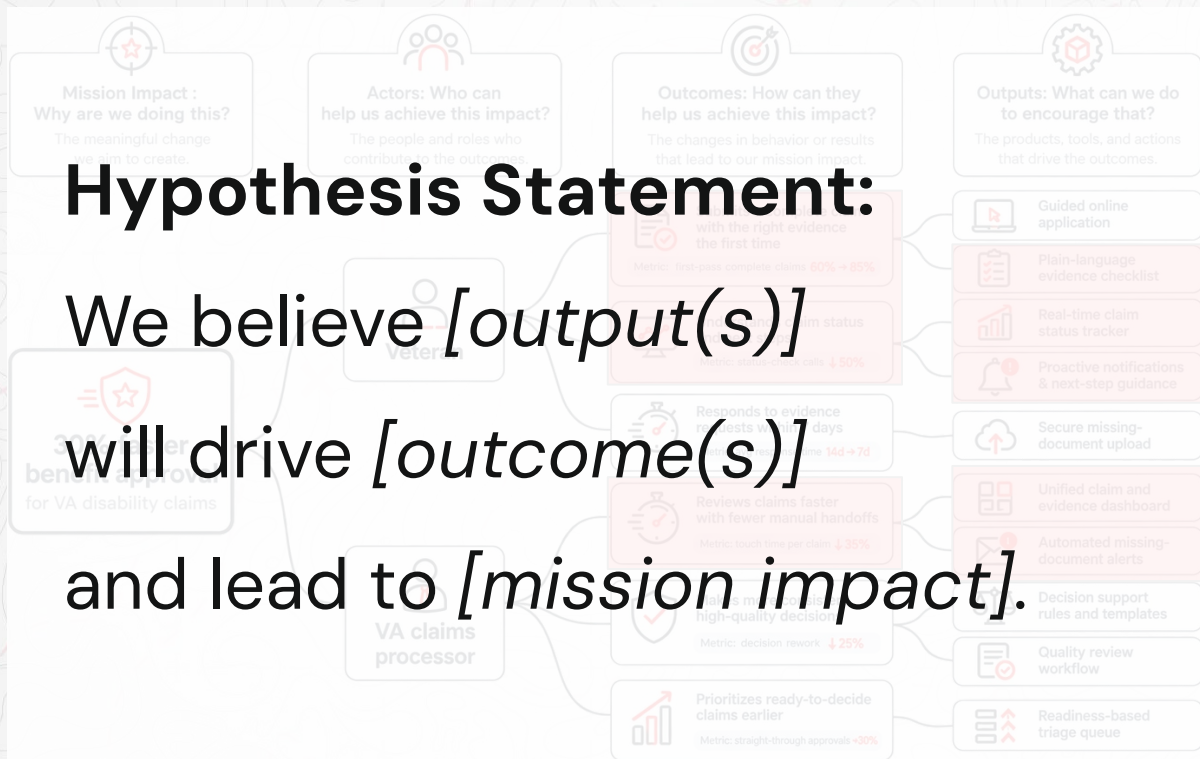
Impact Map



Impact Map



Impact Map



Impact Map

Hypothesis Statement:

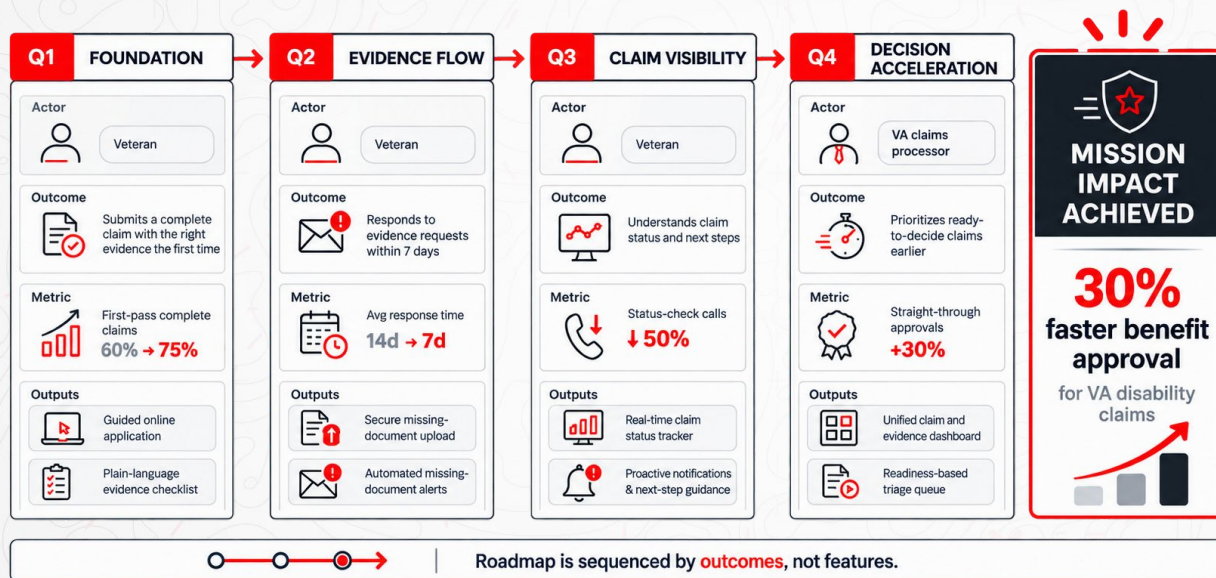
We believe a *plain-language evidence checklist*

will increase first-pass completions by 15%

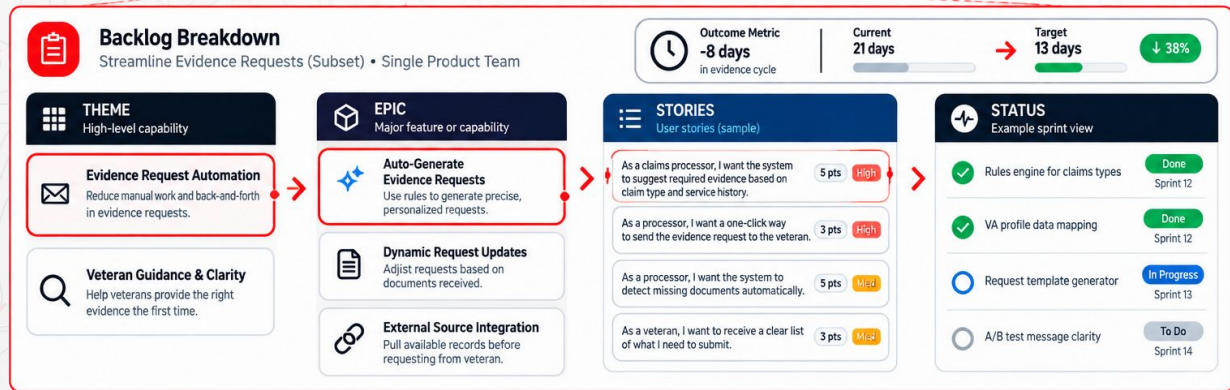
and lead to 8% *faster benefit approval*.



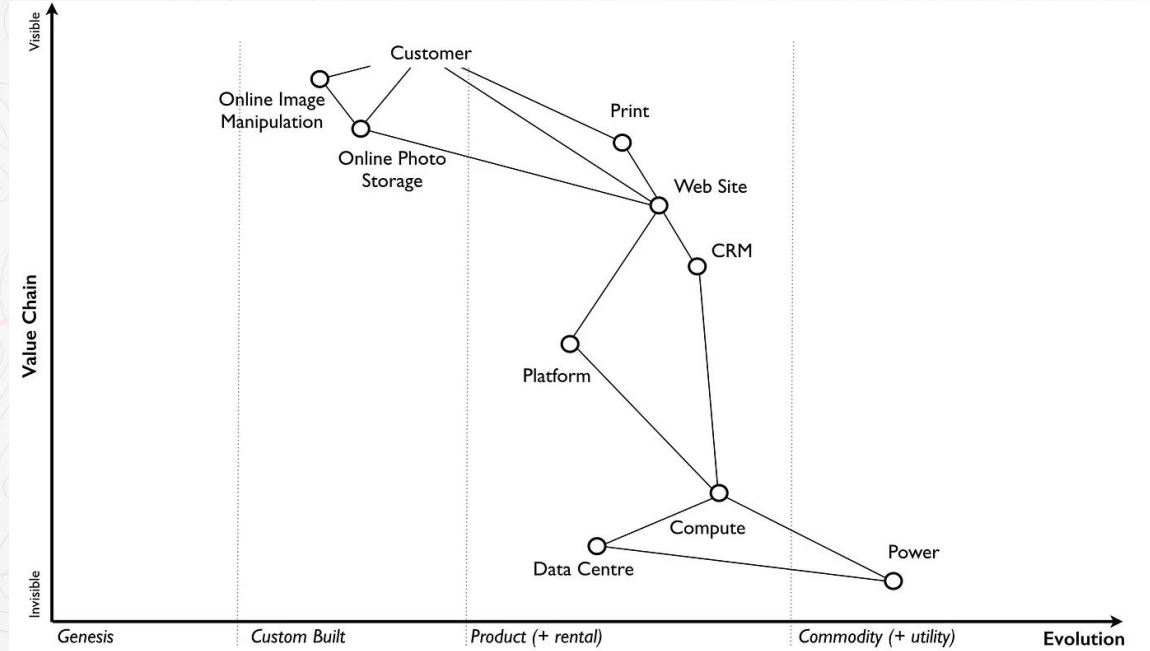
Outcome Oriented Roadmap



Project / Experiment Backlogs



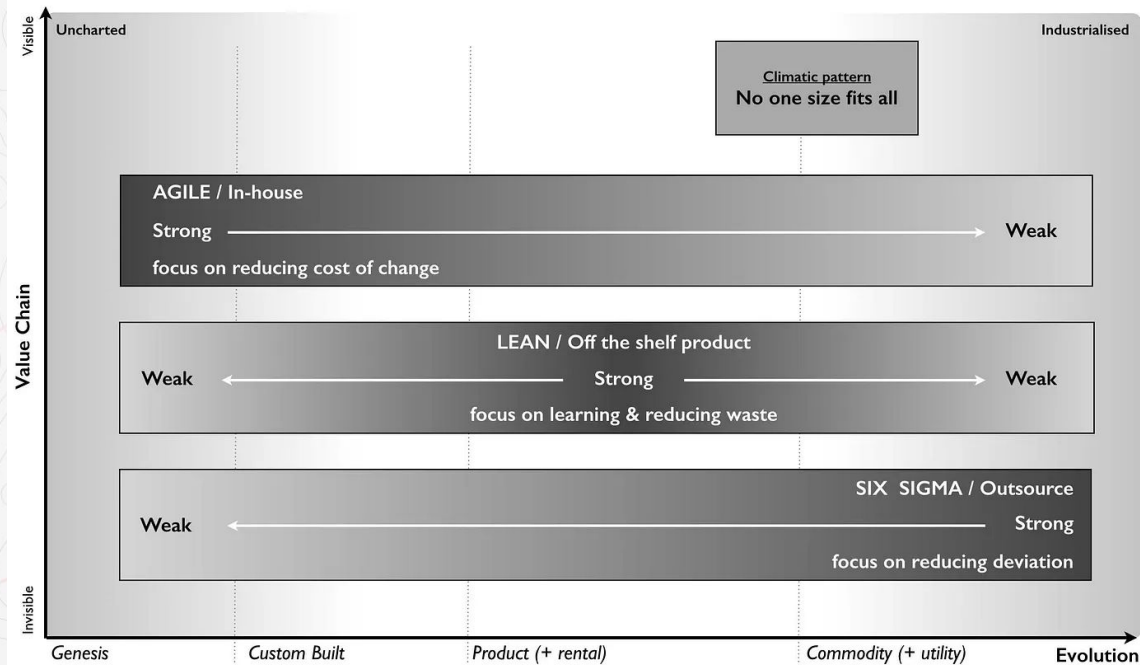
How To Decide Between Project / Experiment



Simon Wardley @ <https://medium.com/wardleymaps>



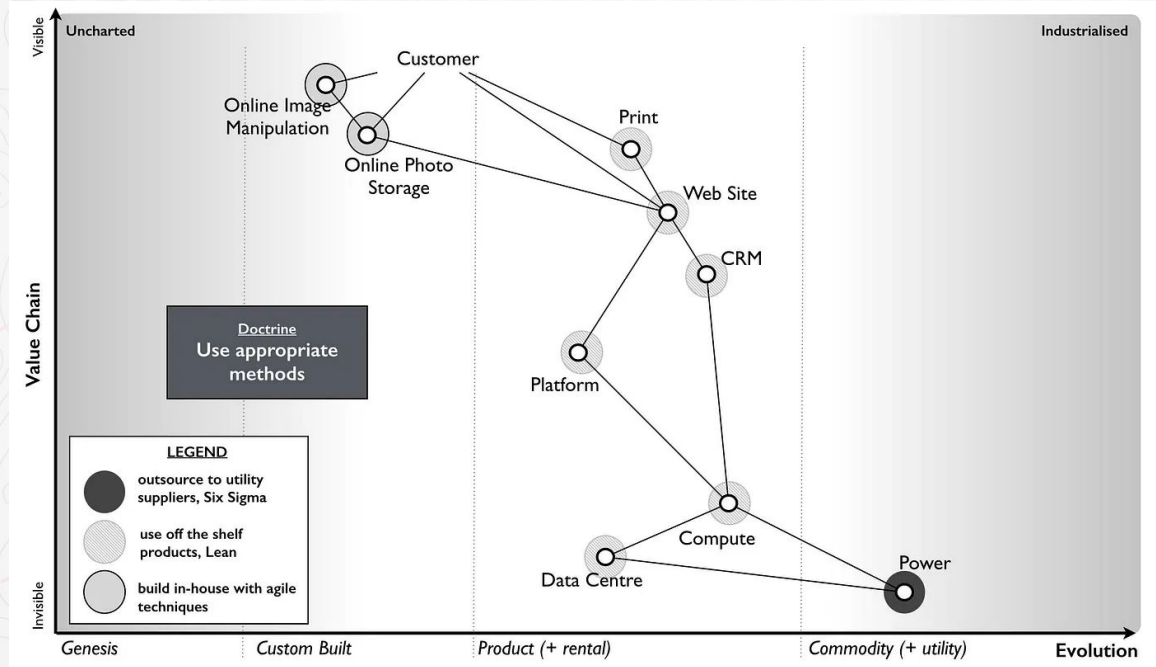
How To Decide Between Project / Experiment



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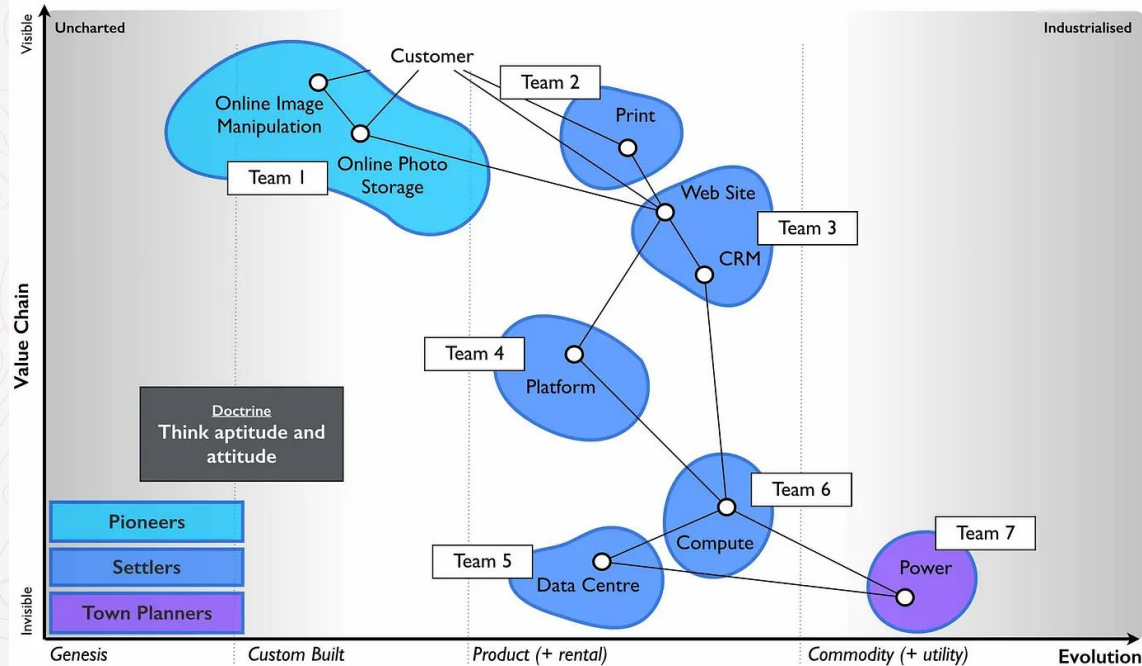
How To Decide Between Project / Experiment



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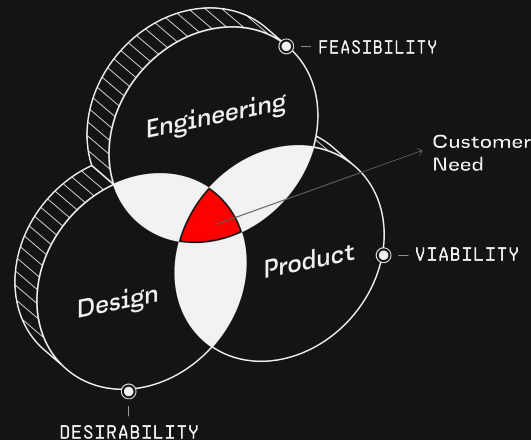


Balanced Teams

Start small

Small, balanced teams of product, design, and engineering—accounting for mission, users, and architecture—create the best outcomes with the least risk.

Start with 1–3 teams deploying real working software to solve a real problem for a real user in a real operations environment.



PRODUCT

PMs lead a team to deliver a product that creates meaningful mission value.

Masters of lean enterprise and own the value stream. They ask, "Will it help the mission?"



DESIGN

Designers focus on the collective experience of the product.

Practice human centered design and design thinking. They ask, "Does this solve a real user problem?"



ENGINEERING

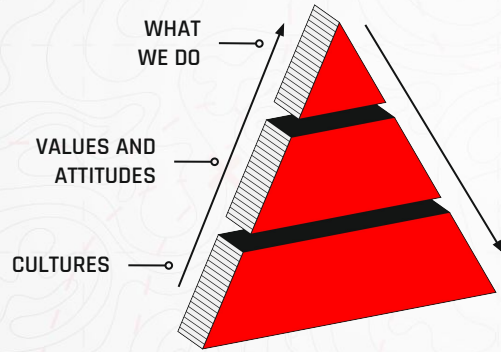
Engineers champion all technical decisions for the product.

Practice Extreme Programming (XP) and own the path-to-prod. They ask, "Is this feasible?"

Culture Change

OLD MODEL

Change thinking to
change behavior

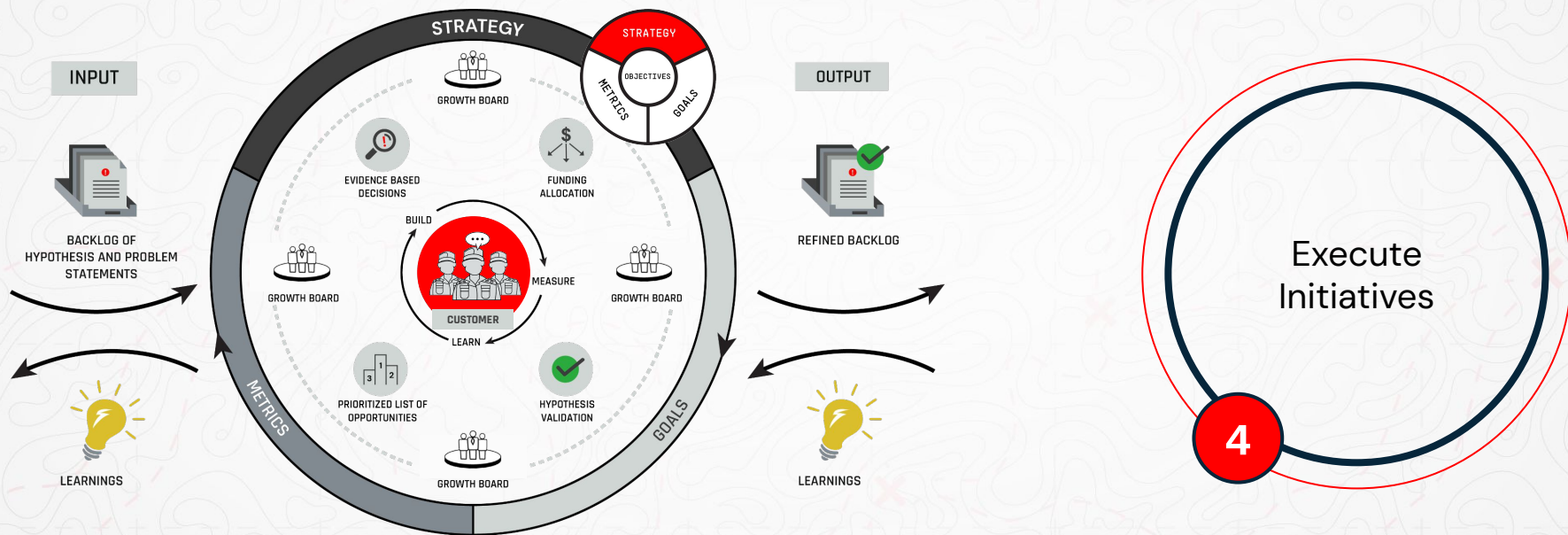


NEW MODEL

Change behavior to
change thinking



New Governance!



$$\text{Value} = \frac{\text{Performance}}{\text{Schedule} * \text{Cost}}$$

Mission Impact * Likelihood of Success

Value =

Time Delay * Effort * Sacrifice

Remember these, though?

Lead Time
Deployment Frequency

Speed

Mean Time To Restore
Change Fail Rate

Stability

Site Reliability

Reliability

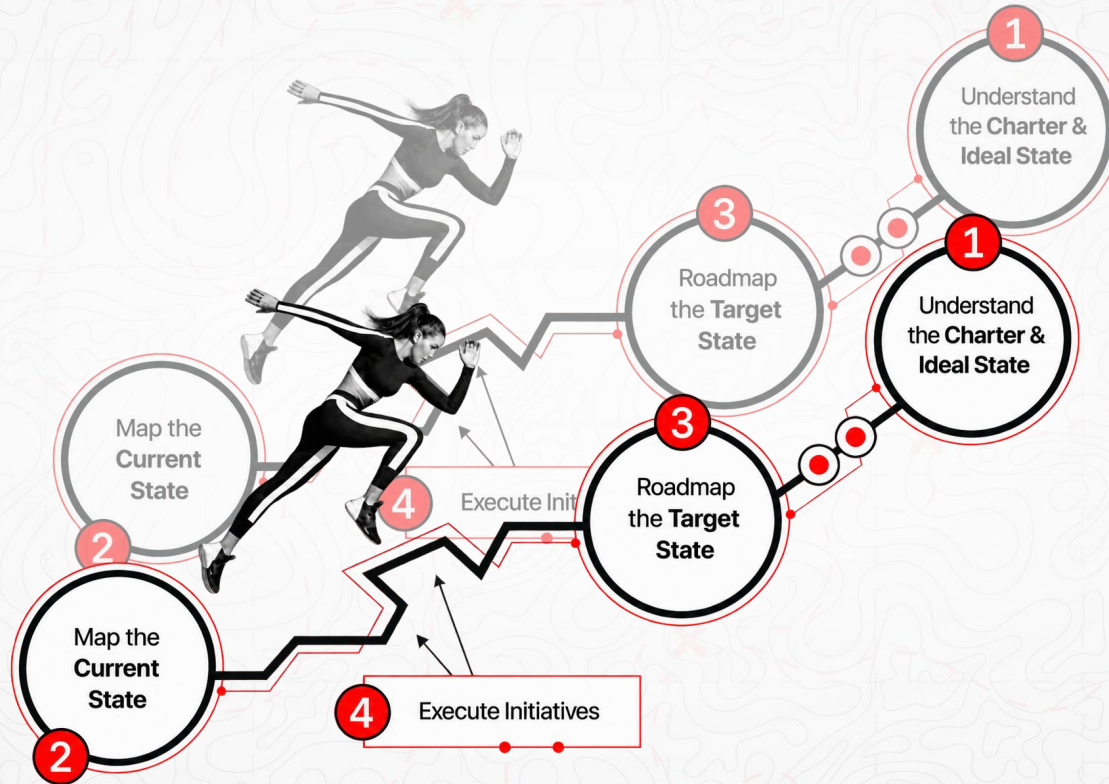
Increase Mission Capability

Mission Metric that Matters

Elite Software Delivery Performance

PERFORMANCE LEVEL	DEPLOYMENT FREQUENCY	CHANGE LEAD TIME	CHANGE FAILURE RATE	FAILED DEPLOYMENT RECOVERY TIME
Elite	On demand	Less than one day	5%	Less than one hour
High	Between once per day and once per week	Between one day and one week	10%	Less than one day
Medium	Between once per week and once per month	Between one week and one month	15%	Between one day and one week
Low	Between once per week and once per month	Between one week and one month	64%	Between one month and six months

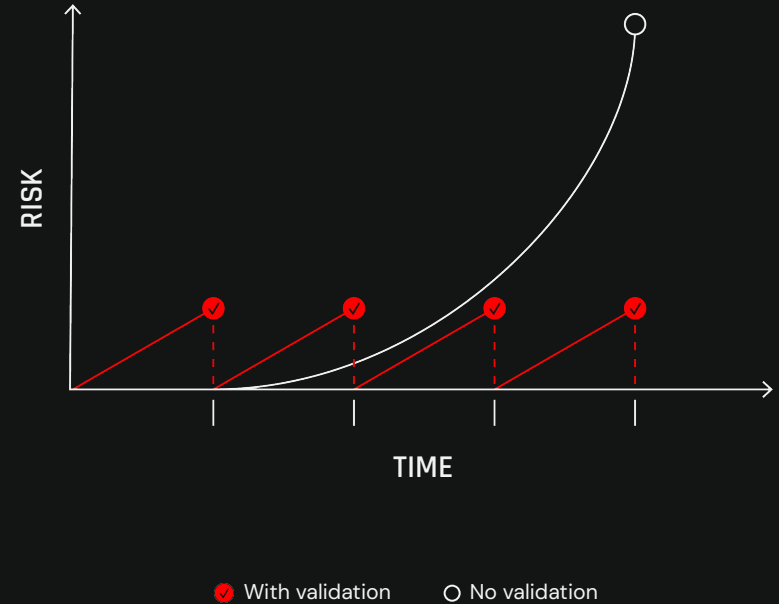
The Supporting IT Value Stream



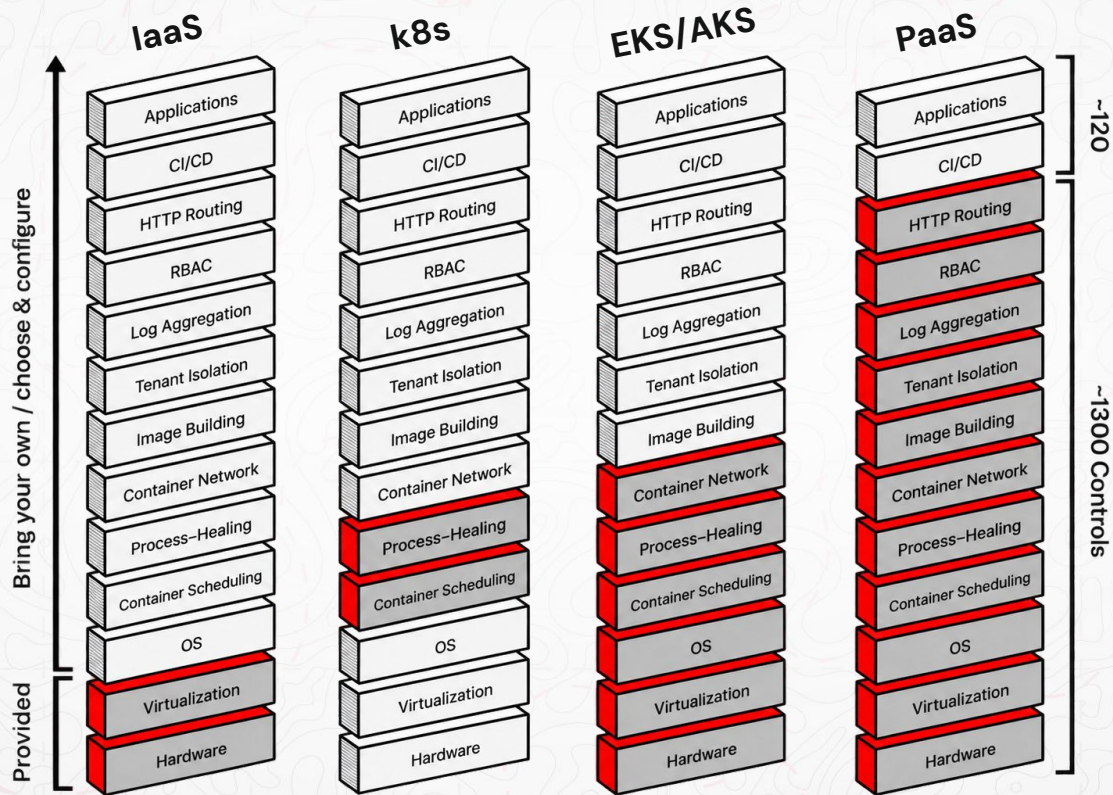
Continuous Delivery

Continuous Delivery (CD) is the ability to get features, configuration changes, bug fixes, and experiments into production **safely** and **quickly** in a **sustainable** way.

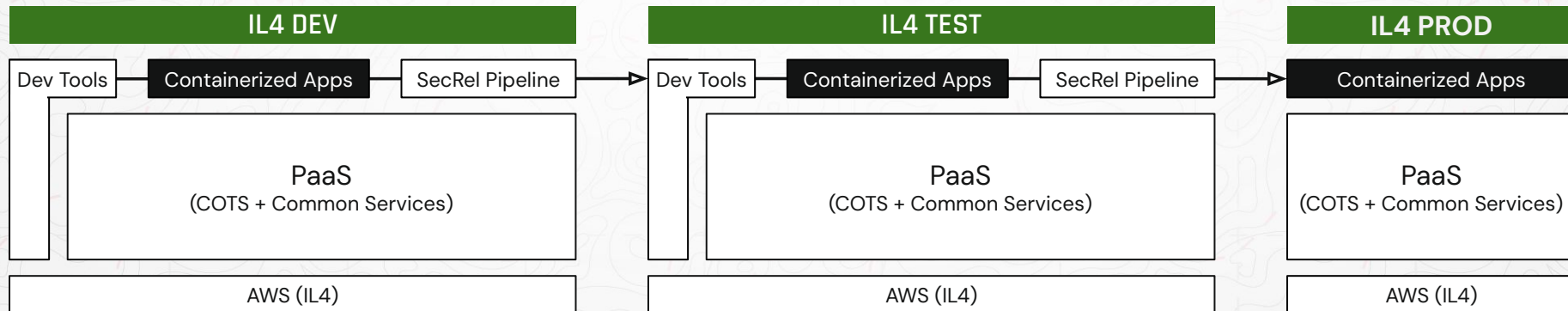
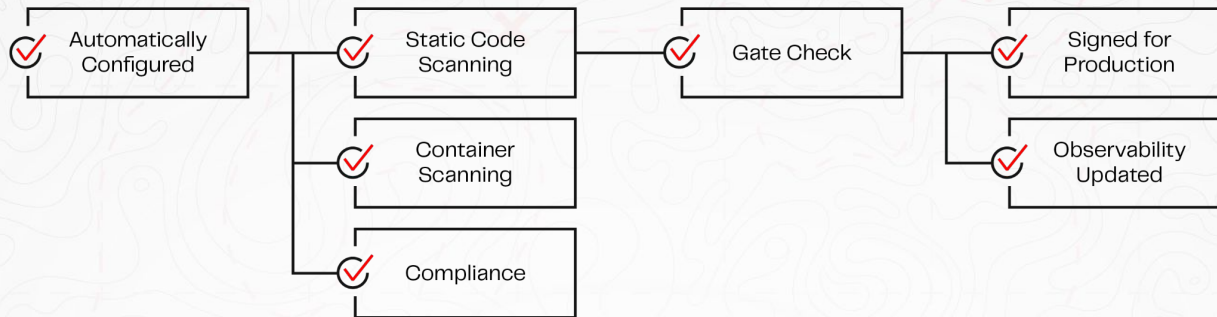
Production is not an arbitrary designation, it is the setting where software is put into **operation** for its **intended uses** by **end users**.



Structured & Opinionated PaaS



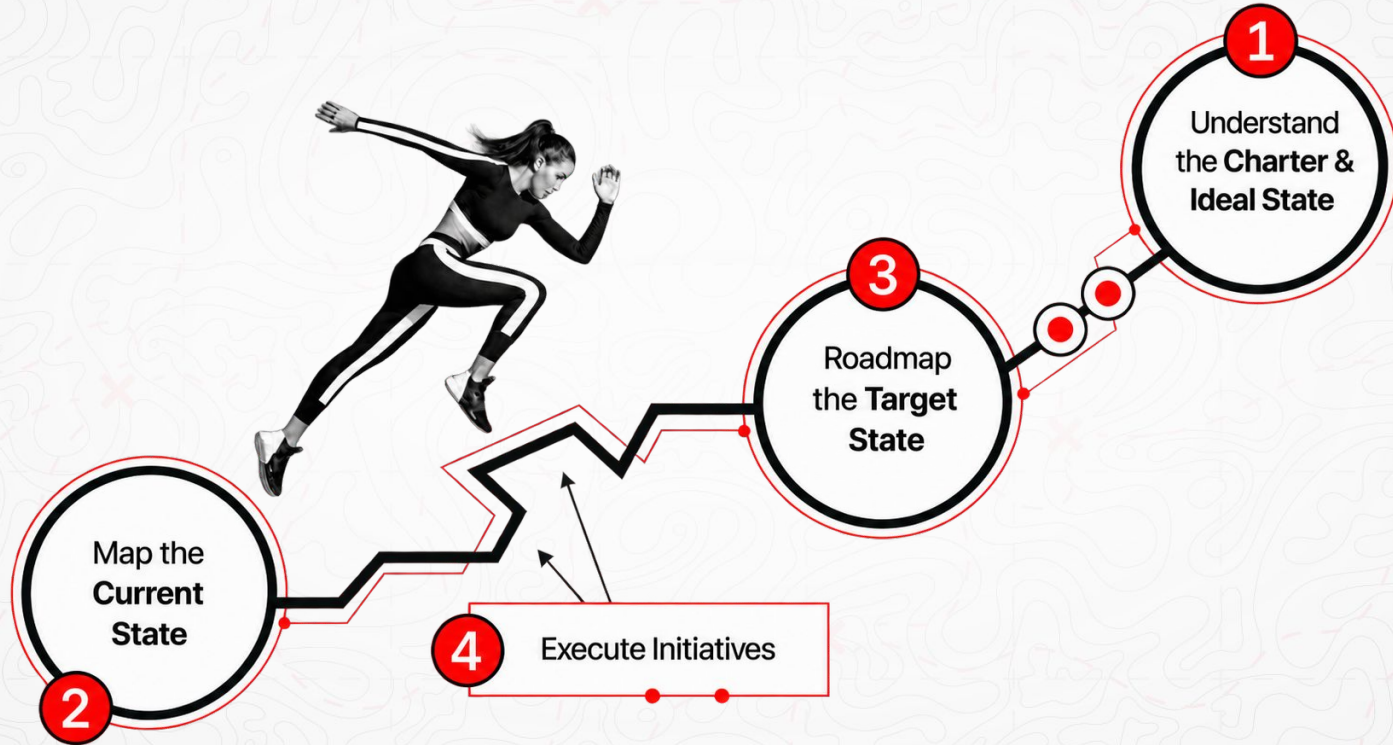
Continuous GRC & Paved Path-to-Production



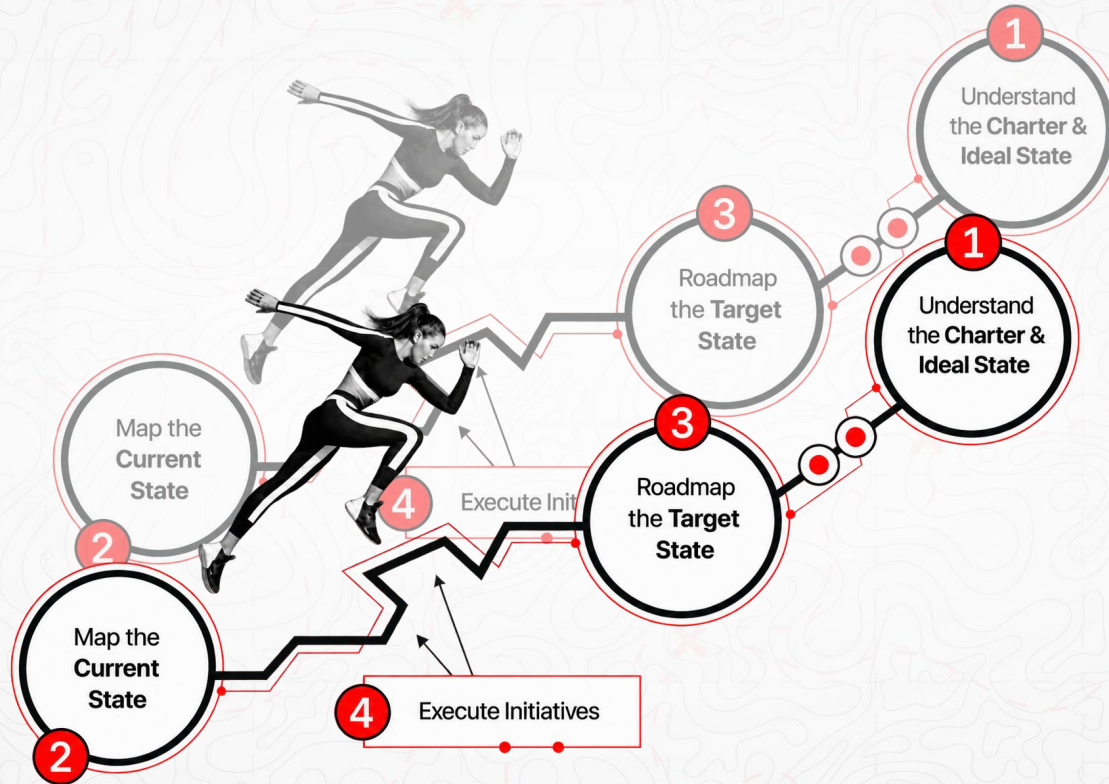
Summarizing



AI is Disrupting Each and Every One of These!



And These!



$$\text{Value} = \frac{\text{Mission Impact} * \text{Likelihood of Success}}{\text{Time Delay} * \text{Effort} * \text{Sacrifice}}$$



General Stephen N. Whiting

General Stephen N. Whiting is the Commander, U.S. Space Command, the 11th unified combatant command.

General Whiting is responsible for defending U.S. and Allied interest in the space domain, providing space effects to joint warfighters around the world, and protecting the Joint Force from space-enabled attacks.

Within that responsibility, he leads over 18,000 Soldiers, Marines, Sailors, Coast Guardsmen, Airmen, and Guardians operating ground and space-based systems around the globe.