STEAL
or
Innovate then STEAL

Two strategies to exploit technical evolution

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Carl Coryell-Martin

Member of Pivotal’s Global CTO Team

2010 Opened the Pivotal Singapore Office
2014 Opened the Pivotal Seattle Office
2019 Joined Global CTO team

~10 years of helping Enterprises build software product teams that delivery value.

14 year old Carl wanted to design ultralight aircraft.

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My Hypothesis:

New practices building on evolution in infrastructure technology are driving 3-100X* improvements in enterprise software development.

*Sometimes 1000X or more....
My Hypothesis:

The same evolutions can transform model based systems development.

*Sometimes 1000X or more....
The Goal:

Deliver

Better Value

Sooner, Safer, Happier*

*Hat Tip to Jonathan Smart @ DOES ‘18 for this framing.
Wardley’s Stages of Technology Evolution
Wardley’s Stages of Technology Evolution

Early Steam & Electrics | Kit Cars, Exotics | Toyota, Chevrolet | Taxi, Uber, Lyft...

Genesis | Custom | Product | Commodity
Applies to Other Things too…

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- 6 Sigma
- DevOps
- ‘Balanced’ Teams
- unnamed around deep learning serverless

Practices:
- Genesis
- Novel
- Custom
- Emerging
- Product
- Good
- Commodity
- Best
Activities are part of a ‘Value Chain’
Evolution drives Innovation

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- Funding
- Program Structure
- Team Structure
- Development Tools
- Services
- Dev/Test/Stage/Prod
- Infrastructure

Plan Build Run

Genesis Custom Product Commodity
Evolution drives Innovation

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Evolution drives Innovation

Funding
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Infrastructure

“Balanced Team”
“DevOps”
Plan Build Run

Genesis  Custom  Product  Commodity

“DevOps”

"Balanced Team"
Why Steal?

Custom Built → Product
Why Steal: Barriers to Adoption
The Middle Management Bind

Team practicing a "new" way of working

Desires new outcomes

New needs propagate up the organization.
So: Steal
STEAL: Continuous Delivery
Requirements: Test & Compute Automation

D
c
cencies

Automated Compute + Automated Tests
STEAL: The Balanced Team

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Elimination of Waste

- Continuous Delivery
- Continuous Integration

Balanced Team

- Cross Functional Team
- Work in Progress Limits
- Test Driven Dev.
- "Trunk" Based Devop.

Automated Compute + Automated Tests

Muda
- Transport
- Inventory
- Motion
- Waiting
- Over processing
- Over production
- Defects

Mura: Unevenness
Muri: Over burden
What a “Balanced Team” looks like today

- 2-12 People
- Co-located, Fully Allocated
- Backlog
- Customers
- Metrics
- Pipeline to Prod
- Prod

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Homework: Rest of the Value Chain

Funding
Program Structure
Team Structure
Development Tools
Services
Dev/Test/Stage/Prod
Infrastructure

“Balanced Team”
Automated Test Environments
“Cloud” Infrastructure
To Sum Up:

Exploiting innovation is hard.
To Sum Up:

If:

a) you can automate tests
   – and –

b) you can automate infrastructure

try building balanced teams.
To Sum Up:

Have your product teams

STEAL

from the innovators.
To Sum Up:

Have your commodity/utilitity/services teams

STEAL

from your product teams.
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