Innovation with “Start-up Speeeeed” in Enterprise Environments

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Where are we?

85% of new products FAIL *

that’s trillions of dollars in wasted innovation each year

* Harvard Business Review
The Challenge

85% of new products FAIL *

that’s trillions of dollars in wasted innovation each year

So -what if we could reduce waste by just 10%

* Harvard Business Review
Innovation

... or innovate as fast as startups?
Lean Startup – a new strategy for Enterprises

4 Principles for Lean Startup  (Steve Blank - Harvard Business Review)

1. Accept that you know nothing
2. Test Smart
3. Measure Smart
4. Iterate at Speed
1. Accept that you know nothing

1. What do our customer really need?
   Do a deep research, to clime the wall between Engineering and your customer!

2. Does our customer know what they want?

3. Working Backwards from your customer demand
2. Test Smart

Innovator love failures!
2. Test Smart

Innovator loves failures! they love to experiment,

=> confirm and reject the hypothesis;
2. Test Smart

Innovator love failures; they love to experiment,

=> confirm and reject the hypothesis;

The economical factor:

• Cost per failure need to be low;
• Reduce failed products - build MVPs
Product development - ideal
Product development - real
Product development - iterate

Innovation & Iteration

Innovator love failures, love to experiment
Product development – ask user / customer

Innovation & Iteration

**Started:** odeo, site to create & share podcasts

**Now:** micro-blogging, 500M users, IPO, >18Bn market cap
Reducing failed products from 85% to 70% is already a very big success.
3. Measure Smart - Lean Analytics

Use the right useful **metrics**

Deliver results in minutes

Supply reports, able to trigger decisions for your product
4. Iterate at Speed

pivot or persevere

de-risking value > experiment cost
4. Iterate at Speed

pivot or persevere

de-risking value > experiment cost

so … Cloud is most relevant to that culture start small – not all final complete;
Feature Innovation

Speed of deployments at amazon.com

11.6s
Average time between deployments (weekday)

1,079
Max number of deployments in a single hour (or approx every 3 seconds)

30,000
Max number of instances simultaneously receiving a deployment
Business Value of Frequent Deployments

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>75%</td>
<td>Reduction in outages triggered by software</td>
</tr>
<tr>
<td>90%</td>
<td>Reduction in outage minutes triggered by software deployments since 2006</td>
</tr>
<tr>
<td>~0.001%</td>
<td>~0.001% of software deployments cause an outage</td>
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</tbody>
</table>
Lean Startups

This change is most complex, but completely doable!

Reference customer
Lean Startups

This change is most complex, but completely doable!

Reference customer

Governmental customer
Lean Startups

This change is most complex, but completely doable!

Reference customer

Governmental customer

Financial services institution
Provide a Base for our Lean Start-ups
Provide a base for Lean startups

A Cloud Infrastructure can improve the speed of Iteration, by providing

- Infrastructure, when needed
- usable XaaS-Solutions
- Guidance and AWS best practice
AWS Tools to assist

• Guardrails for DevOps
• Easy interface for customer
• Infrastructure as Code
• CICD Tools
• Monitor the success
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• Guardrails for DevOps
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• Monitor the success

AWS IAM & Org.
AWS Service Catalog
AWS Cloud Formation
AWS Elastic Beanstalk,
AWS Code *
AWS Config, …
Provide Infrastructure, when needed

Customer Request
Fill in Request form using e.g. AWS Service Catalog

Account-Compliance
The guardrails for the AWS Account – like:
• logging, monitoring,
• User-management (IAM)
• VPC (CIDR, GW, ..)
• network access, ..
Provide Infrastructure, as needed

Customer Request
Fill in Request form using e.g. AWS Service Catalog

Request
OK

Generate new AWS-Account using AWS Organization

Setup Install User in new Account

Account-Compliance
The guardrails for the AWS Account – like:
• logging, monitoring,
• User-management (IAM)
• VPC (CIDR, GW, ..)
• network access, ..

Request Form
• ...
• ...

Request OK

Yes

NO
Provide Infrastructure, as needed

Customer Request
Fill in Request form using e.g. AWS Service Catalog

Request OK

Generate new AWS-Account using AWS Organization

Setup Install User in new Account

Setup Core services in new Account

Account-Compliance
The guardrails for the AWS Account – like:
• logging, monitoring,
• User-management (IAM)
• VPC (CIDR, GW, ..)
• network access, ..
Provide Infrastructure, on request

**Customer Request**
Fill in Request form using e.g. AWS Service Catalog

**Account-Compliance**
The guardrails for the AWS Account – like:
- logging, monitoring,
- User-management (IAM)
- VPC (CIDR, GW, ..)
- network access, ..

1. Request OK
   - Yes:
     - Generate new AWS-Account using AWS Organization
     - Setup Install User in new Account
     - Setup Core services in new Account
   - NO:
     - Request Form

2. Account handed over to Requester (Customer) with restricted admin-rights
Provide Infrastructure, and feedback

Customer Request
Fill in Request form using e.g. AWS Service Catalog

Account-Compliance
The guardrails for the AWS Account – like:
- logging, monitoring,
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Request OK
Generate new AWS-Account using AWS Organization

Setup Install User in new Account

Setup Core services in new Account

Account handed over to Requester (Customer) with restricted admin rights

Customer Feedback and requests

Review and Refine corp. Compliance and best practice recommendation

Logging, Monitoring, Backup, etc.

AWS Reporting
offer reports like
- cost and billing,
- Security & Risk,
- ...
- more TBD.
Cloud Infrastructure can reduce Cost of failure, by

- Remove Infrastructure, when not needed
- Monitor and provide feedback using AWS Best Practice & the Well Architected Framework
- Handing over the responsibility to App-Dev-Team = DevOps
WAR – 5 Pillars of Well-Architected

AWS Well-Architected

- Reliability
- Security
- Performance Efficiency
- Operational Excellence
- Cost Optimization
So – to innovate at Start-up Speed in Enterprise Environments
For IT and the CCoE

- Setup processes and the environment for Builder and Innovator
- Provide portal for Cost Management and …
- Act as a CCoE and consult with Best Practice
Get started

For Business Owner & Development

✓ Use the AWS Services as an asset and return it, when not needed.

✓ Reach out to your AWS Account team for assistance and advisory.
Yes you can innovation with “Start-up Speed”!

Thank you

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