

Challengers of traditional IT

① Poor Quality of products

- Create / deliver products that offer less value
- Fail to meet expectatn of customer

② Irregular release or updates

- Unable to update at shorter time spans

③ Product backlog

- leading to business loss

④ Outdated processes

- leading to loss of effort, time & money

D13 connect b/w Development & Operations team

- Lack of collaboration
- D13 integrated process
- Diff. in tools & implementation processes → leading to errors & bug
- D13 interest in learning new tools
- Poor feedback system

Traditional IT culture

- organisation culture mimics the organizations architectural design of 2 silos with competing objectives.

Devops culture

- It is focused on end to end operational delivery (speed & quality).

Early Adopters

- Google • Amazon • Facebook • Uber • Netflix

DevOps

Gartner defines a change in mindset of IT through leaders, breaking age old traditional practices and adapting to Agile & lean principles that emphasise on customer value.

- People, culture, collaboration & communication within organization come together to deliver efficient products.
- This helps to iterate, ideate and iterate at faster pace & release new features

Benefits

- Reduction of lead time
Brings together the development, operations and creates a process that allows collaboration.
- Reduction in failure of product & its releases

The room for error is reduced as diff. junctions involved in product building & delivery are unison.

Collaboration

development & operations team collab to serve customers & to overcome diff. problems.

Scalability

It involves automation of processes & eliminates inefficiencies across product lifecycle. This allows organization to scale rapidly.

Reliability

• optimum utilization of cost & resources

Transparency

• Honesty & openness

• Grassroots innovation

Agile

• It breaks product delivery into smaller iterations offering a complete product

• brings together off. teams for faster delivery of product.

Lean

• motive is to deliver customer value with optimum utilization of process & to eliminate waste

• tends to focus more on method for product development.

CAMS model - Gene Kim

• Culture • Automation • measurement • Sharing

Culture

• Devops propagates a very open culture that promotes trust, eliminates blaming, embraces transparency & allows teams to work & contribute independently.

• Prepares for constant syncing without room for any degradation.

Automation

• helps in removing the bottlenecks that may occur due to poor processes & replacing it with efficient and automated focus.

Measurement

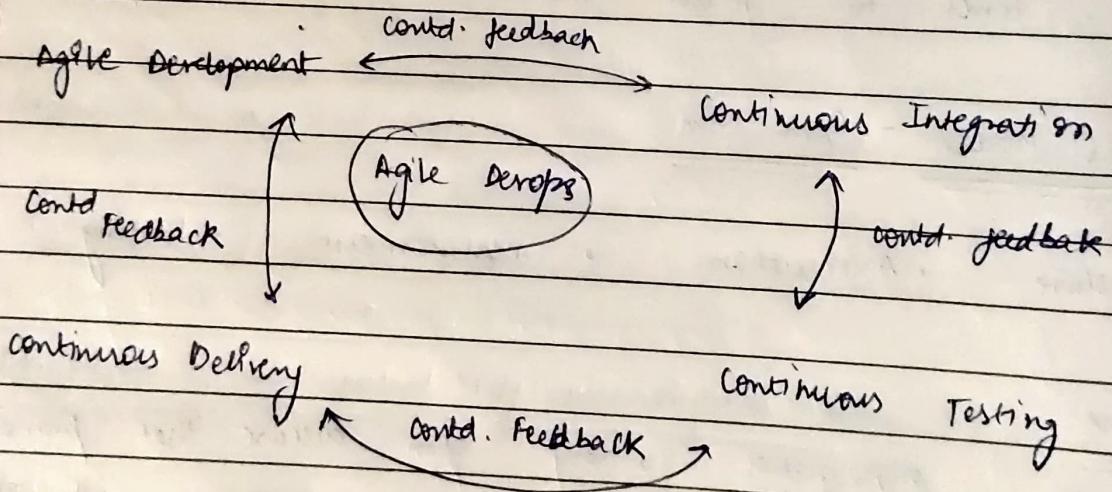
Needs to constantly track & monitor application performance to constantly improve.

Sharing

- Sharing of knowledge product info, new processes techniques for speedy delivery of product.
- Enables collaborative team environment

DevOps & Agile

- Increase the efficiency of product delivery
- propagate culture
- offers structured processes
- Help companies to stay relevant



- DevOps is more an extension of agile software development i.e. it integrates development, quality assurance & operations team to build faster products.

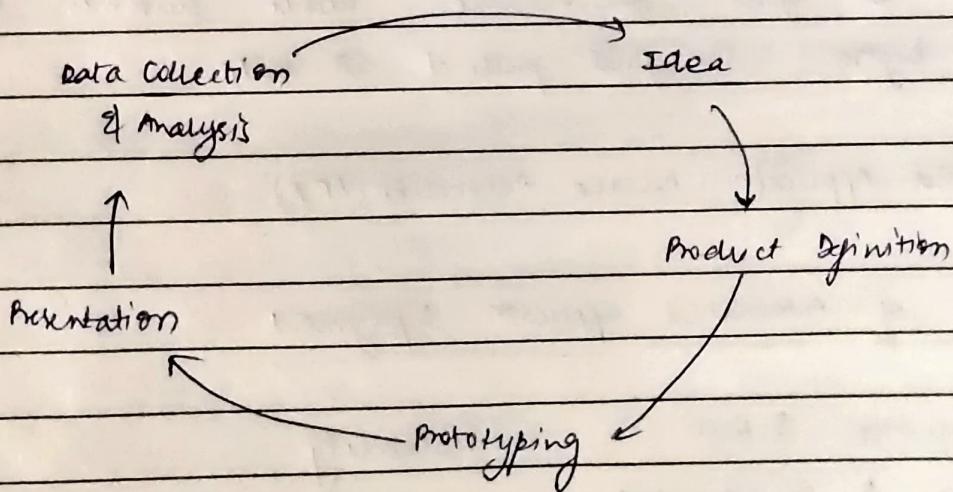
Agile Methodology

- Individuals & interactions over processes & tools
- Functional software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

Minimum Viable Product (MVP)

Eric Ries author of lean start-up.

→ It is that version of a new product which allows a team to collect the maximum amount of validated learning about customers with the least effort.



- An MVP is a miniature of final product that has scope for more features & on scale to grow into a fully functional complete product.

Benefits of MVP

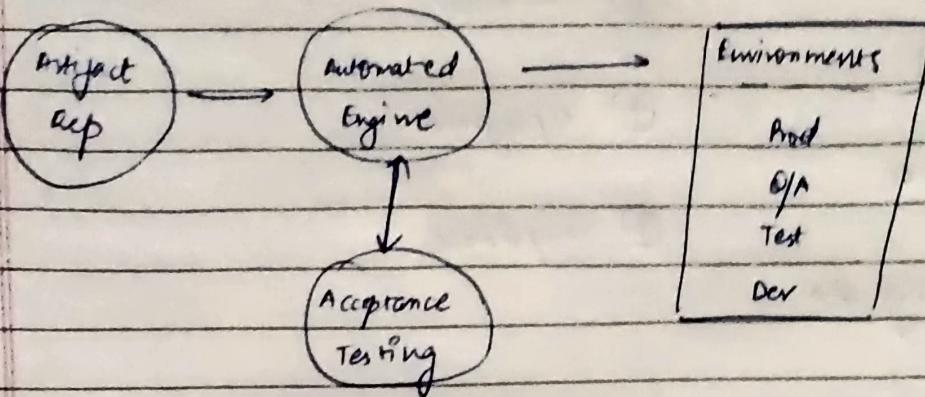
- Produce valid market stories
MVP is a tool to identify customer intentions. validating the results is best way to understand demands.
- Strengthen focus on value proposition
- Shortcut to customer's feedback
It is a tool to gather real world data on customer feedback. It will give a clear picture on the ways customer will use the product.
- Empowers business spirit.
- ~~MVP~~ gives you a clue about customer behavior even before the final product is made.

Automated Application Release Automation (ARA)

Benefits of Automated Application Deployment

- cost effective & fast
- Reliable & maintainable
- transparent, informative
- Secured
- Scalability

Automated Deployment



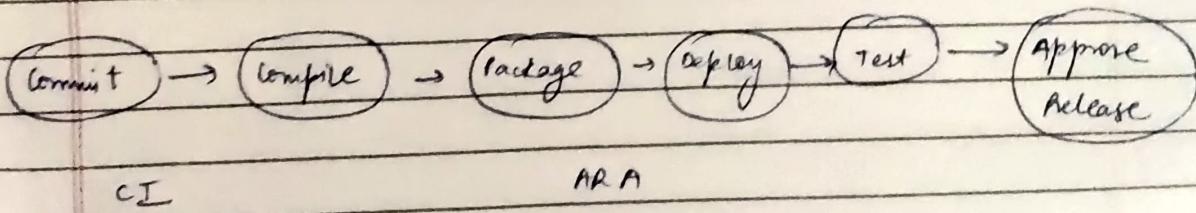
Automated deployment is used to eradicate following

- Inconsistency across environments
- was neither repeatable nor reliable
- Require extensive documentation
- hinder collaboration

Application Release Automation (ARA)

- It is the consistent, repeatable & auditable process of packaging & deploying an application
- Tools, scripts that automatically install & correctly configure a given version of application

continuous delivery Pipeline



Components of IMA

- ① Packaging
 - ② Dependence
 - ③ Promotion
 - ④ Deployment
 - ⑤ Compliance

Functions of ARA

- Deployment of data, application of code & artifacts
 - Deployment of specific configuration for each environment
 - High product quality
 - Customer satisfaction
 - Faster & lower effort audits
 - Quick troubleshooting