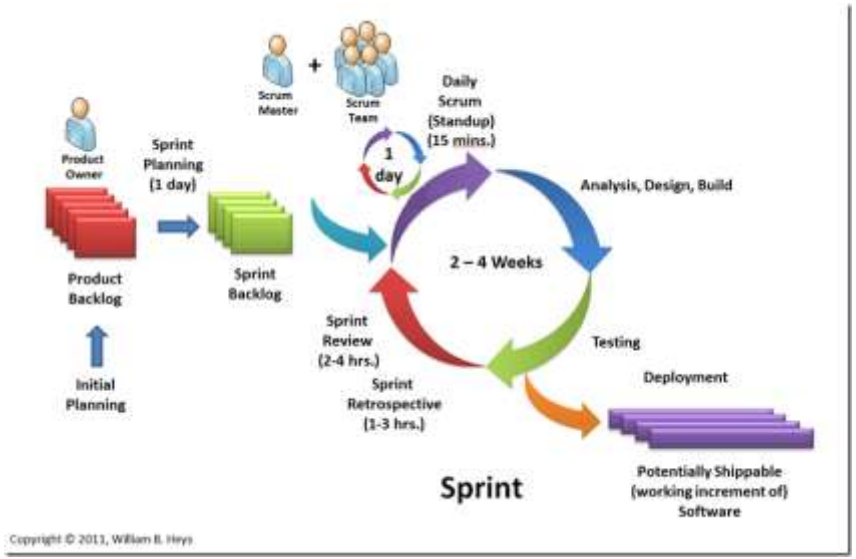
Scaling Scrum To Large Distributed Teams and its Challenges

Pooja Wandile

Scrum

- As designed for use
  - 2 – 4 weeks sprints
  - Small and self organized team, 7 members +/- 2
  - Co-located
  - Face to face communication
  - Cross functional
  - 3 roles, 3 artefacts, 4 scrum meetings
  - Potentially shippable product at the end of each sprint



Scrum XXL?

Complex Products

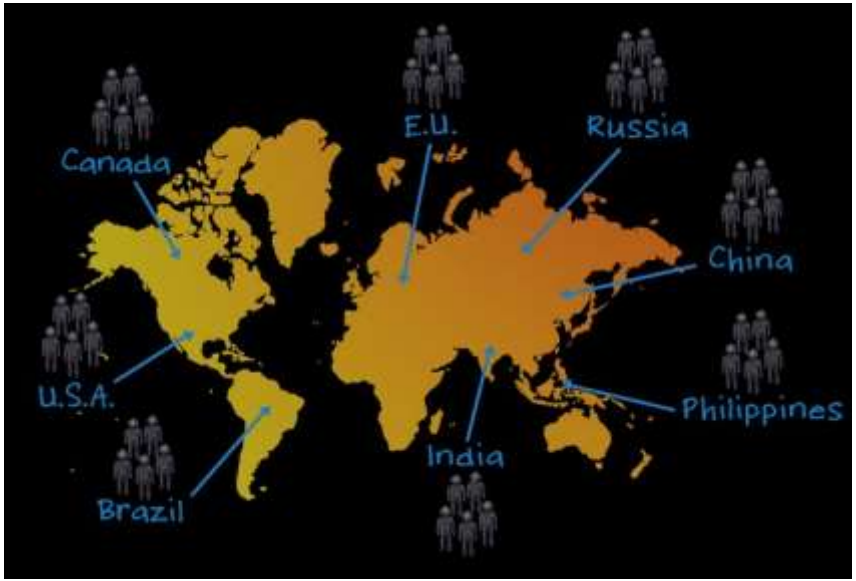
Agile Manifesto & Principles

Scrum Practices

Large Teams

Scrum: S to XXL

- Different versions
  - Multi locations
  - 3> Scrum teams < 20-25
  - 100+ people
  - Team size > S
  - Non IT teams
  - Global teams
  - Enterprise adoption



Enterprises Adopting Agile Rapidly

57%

Enterprises having 5+ agile teams. Doubled in last 2 years!

43%

Enterprises having 10+ agile projects

76%

Enterprises have distributed teams, doubled in an year

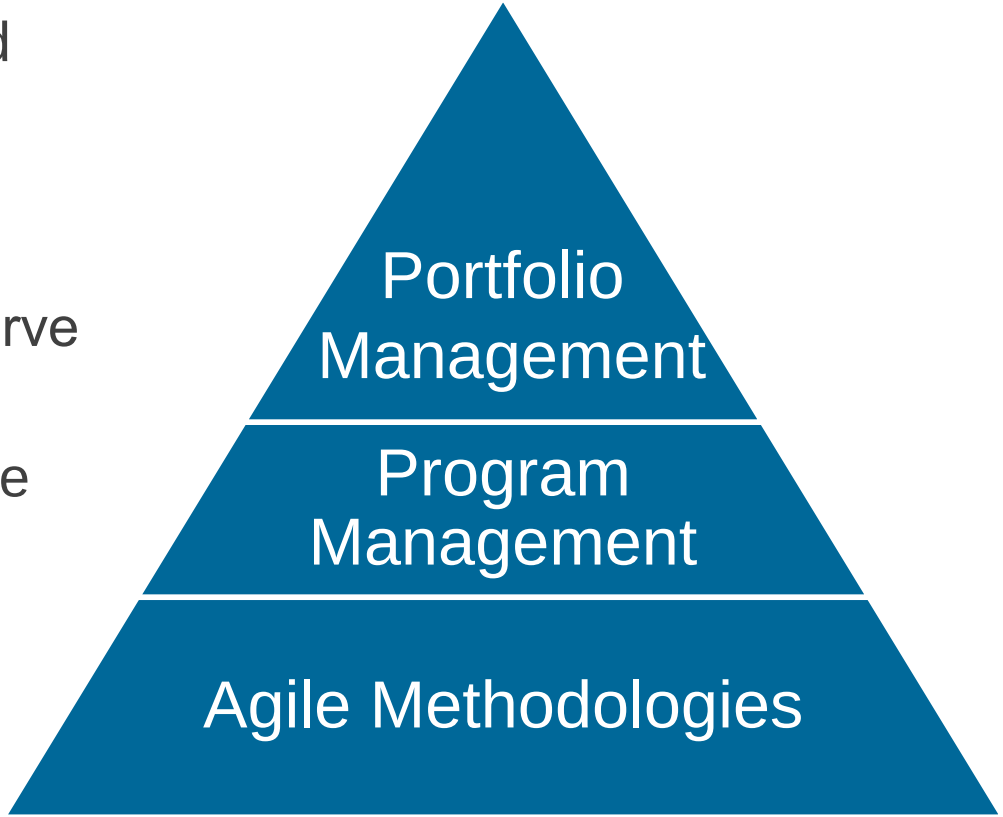
SCRUM continues to be most popular agile practice, Scrumban is gaining momentum.

80% Agile projects' failure could be attributed to inappropriate Change Management. Cultural Change is cited as most challenging aspect.

Source: 8th Annual State of Agile Survey by Version One: http://www.versionone.com/pdf/2013-state-of-agile-survey.pdf

Can Agile Scale?

- Agile methodologies intended for smaller teams were not designed for large scale deployment
- Agile practices alone can't serve the purpose of enterprises IT
- Scaled deployment is possible by blending with Portfolio & Program practices



Key Considerations

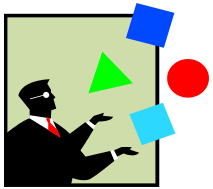
Business Value

- Large scale deployment is rising

Productivity

- Business wants prioritized delivery of value at a speed to rival the competition at the reduced cost

Time to market



Changing Priorities

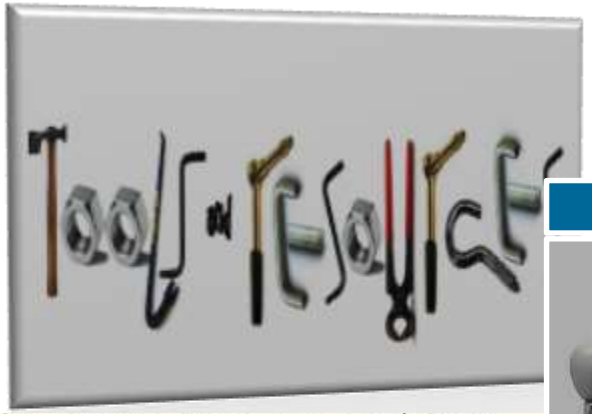
Agile Manifesto

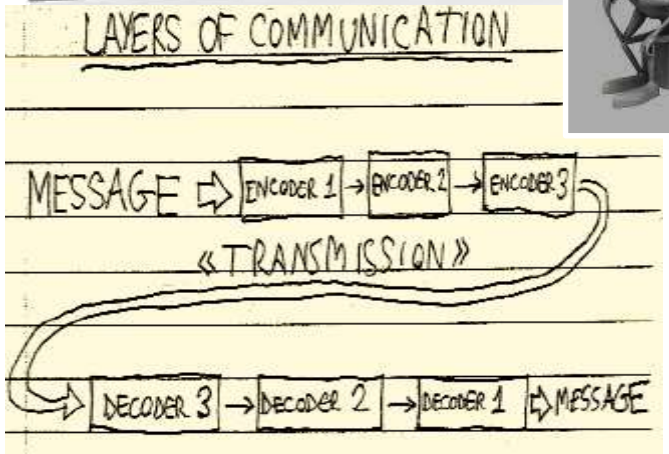
Individuals and interactions over processes and tools
Working software over comprehensive documentation
Customer collaboration over contract negotiation
Responding to change over following a plan

Manifesto is unclear about key Enterprise Asks

Portfolio Management Business IT-Alignment Processes Innovation
Predictability Risk Management IT Budgets
Strategy Security Architecture

Scrum XXL: What Changes?





PERSISTENT

Scrum XXL: Challenges

Scrum XXL Challenges

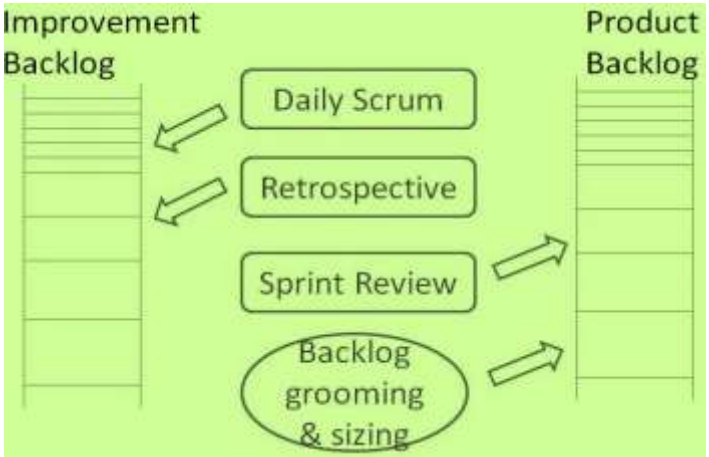
- Scrum Framework
  - Roles
  - Events
  - Artifacts
- Team structure
- Team Communication & Collaboration
- Knowledge & Reuse
- Infrastructure & Operations

Scrum Roles Challenges

- Product Owner
  - Insufficient bandwidth
  - Overloaded
  - Addressing teams queries
- Scrum Master
  - Too many meetings
  - Managing dependencies and issues across teams
- Team
  - More processes & Documentation
  - Someone else is calling the shots

Scrum Events Challenges

- Product Backlog grooming
  - Product Scope vs. Budget,
    - what gets in – what gets out, ongoing exercise
  - Long grooming meetings for all teams
- Sprint planning
  - Mapping of Sprint goal vis-à-vis big picture
  - Inter team dependencies
- Daily Scrum Meeting
  - Hard to accommodate distributed team members
  - Difficulty in understanding active participation (body language/facial expression)

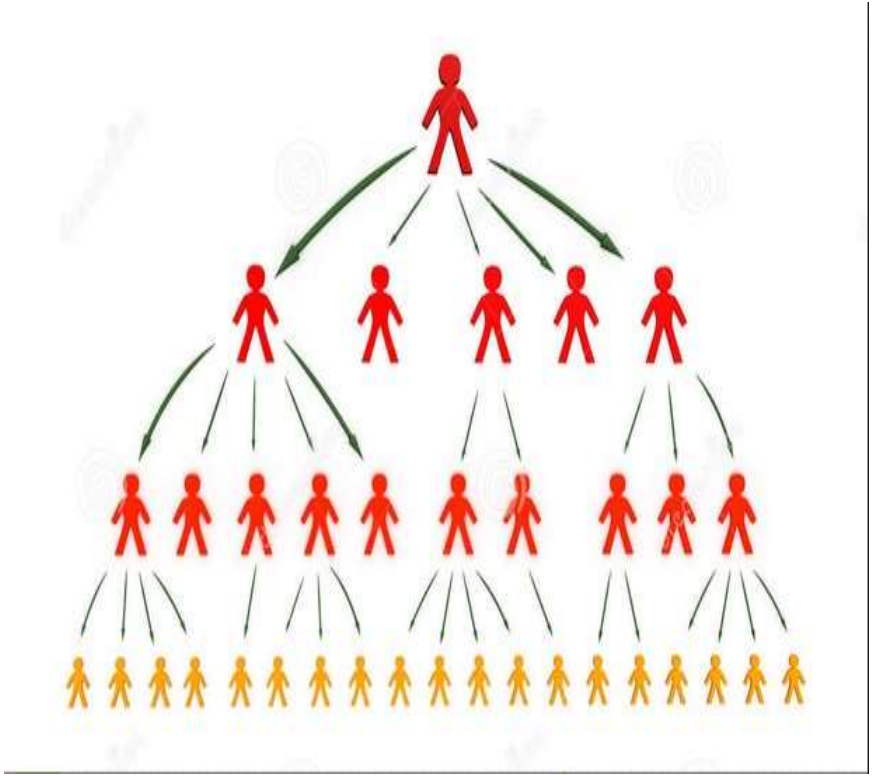


Contd…

- Sprint Review
  - Fragmented view of features developed
  - Not exactly complete increment, value stream missing ☹
- Sprint Retrospection
  - Complete lack of active participation in the retrospection conference
  - “It is not my problem” attitude
- Scrum of Scrums
  - Managing Impediments across teams
  - Aggregated view of progress
  - Co-ordination challenges, too many people involved

Team Structure Challenges

- Pyramid team structure
  - Delay in communication
- Dealing with additional roles
  - Pigs & Chickens roles merging
- Component and feature teams
  - Additional non feature based teams
- Addition of PMO

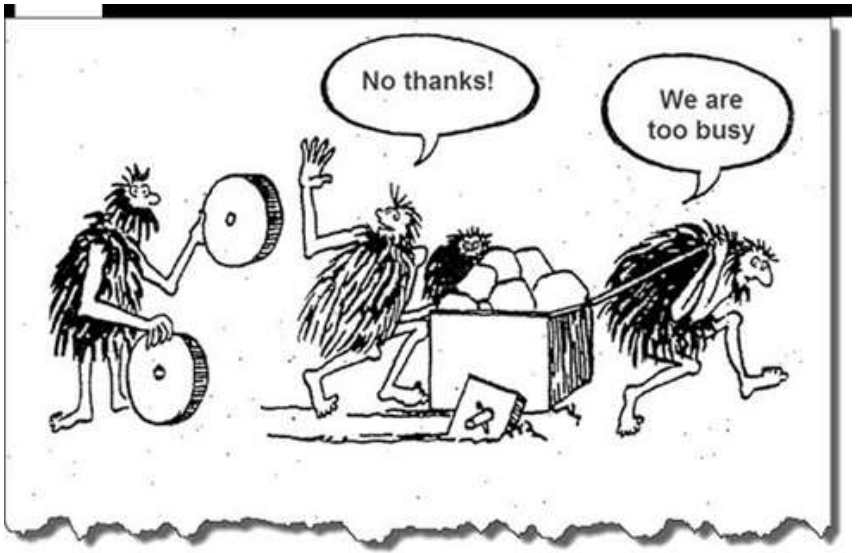


Communication & Collaboration Challenges

- Overdose of email communication
  - Every email is urgent
- Internal & External communication
  - Conflicts, misunderstandings, uncertainty in communication
- More documentation, can't help
  - Keeping documents up to date
- Dependency on multiple collaboration tools
- More teams, more confusion, more delay in decision making

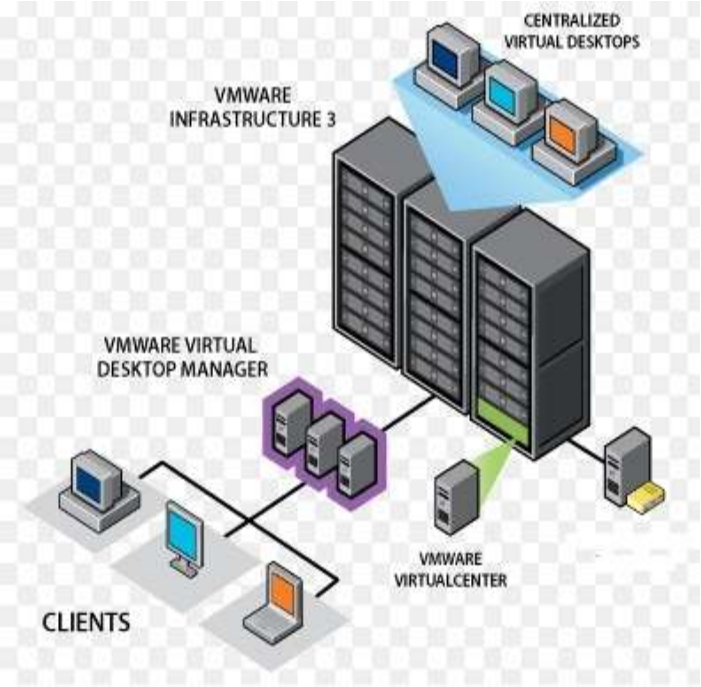
Knowledge & Reuse Challenges

- Reinventing the wheel
  - For the same set of common issues
- Duplication of efforts
- Lack of consistency in processes across teams



Infra & Ops Challenges

- Lots of different environments
  - Dev, INT test, staging, UAT, production
- Environment configuration & Management issues
- Budget constraint
  - Infra not scaling in proportion with team scaling
- VPN, Access request, Licenses issues
- Automation
  - Test, build, integration, regression, deploy



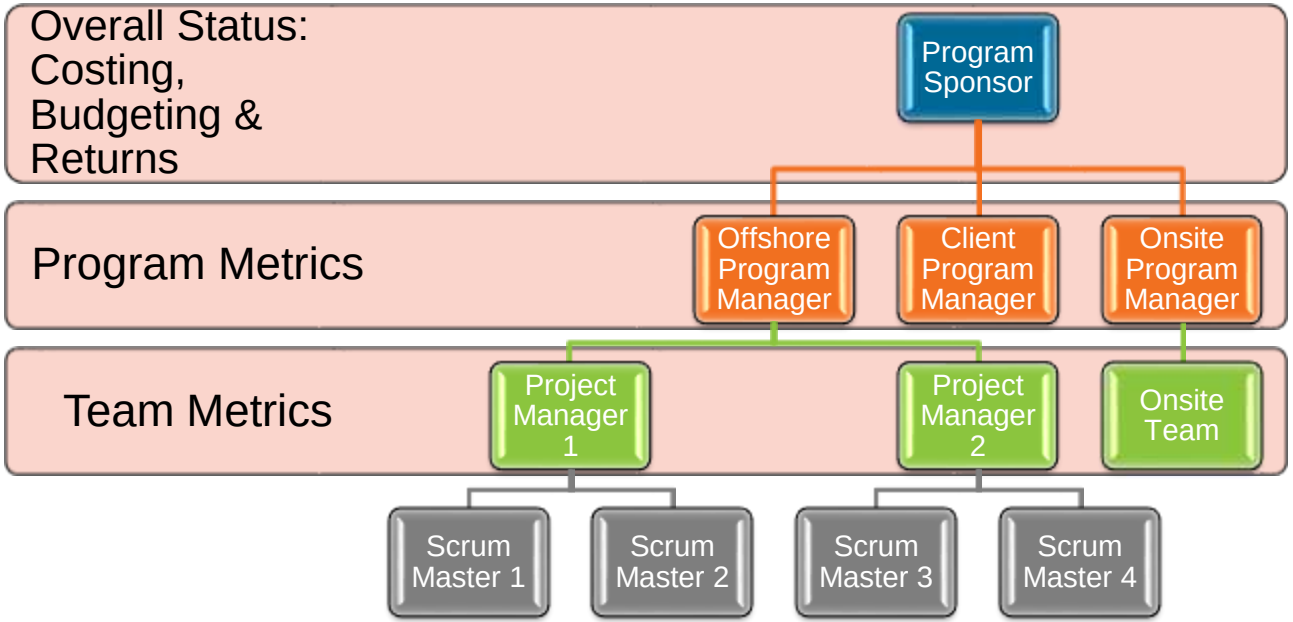
PERSISTENT

Scrum XXL: Approach

Steps

- Restructure teams
  - Product, Engineering, Feature, Ops, QA, PMO
- Adapt to Scrum framework
  - Tailoring of scrum events
- Consolidate Communication & Collaboration channels
  - Communication modes, collaboration tools and processes
- Establishe Chapters & Guilds for capability building
  - Spotify model
- Optimize cost and usage by investing in Cloud infrastructure and VMs

Project Management Office



Product Management Team

Chief Product Manager

Overall owner of the product roadmap, release plan, final authority in conflicting situations

Product Manager, Feature

- Manage program backlog
- Provide Feature feedback

Product Manager, UX/UI

Product Owners, Feature

- Manage Feature backlog
- Provide user story feedback

UX/UI Designers

Business Analysts

- Act as a liaison between team and PO
- Resolve day to day queries

Engineering Team

Chief Architect
- Own system architecture and infrastructure

System Architect
- Define technical Epics

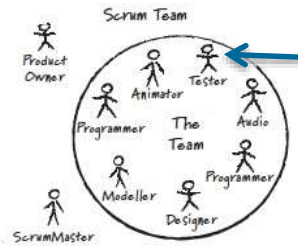
Enterprise Architect
- Define NFR epics
- Define enterprise architecture governance

Team Captains : Enterprise
- Own performance, load and other NFR implementation

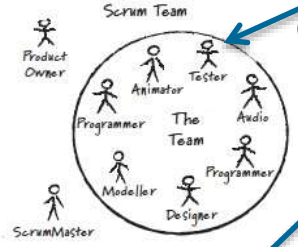
Solution Architect
- Define technical stories

Team Captains : Technical
- Own low level implementation
- Manage tech debt

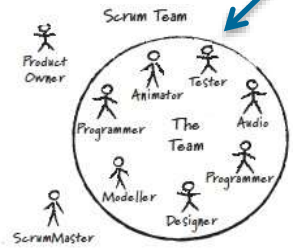
Scrum team, QA, Ops



Create build:
Feature 3



Create build:
Feature 2



Create build:
Feature 1

Integration, Regression,
UAT testing of features

Deploy and release to
staging & production

Scrum Framework Adaptation

- Product backlog grooming
  - CPO & PMs: Program backlog: Once in 2 weeks grooming
  - PMs, POs, Architects, BAs: Feature backlog: Weekly grooming
- Sprint planning
  - BA, Scrum Team: Team Sprint backlog: One sprint ahead
- SoS
  - Team Captains, Architects, POs: Impediment log: Once a week,
  - Inter team dependencies, backlog status

Contd…

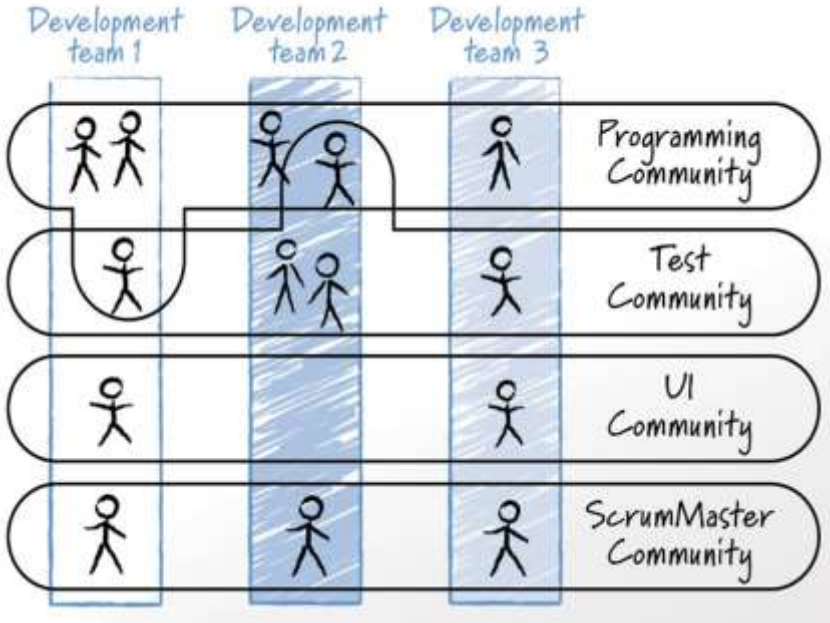
- Sprint Review
  - User Story acceptance by POs at sprint level
  - Monthly demo of features to other stakeholders
- Sprint retrospection
  - Team retrospection
  - Monthly Common retrospection
    - Consolidated findings across teams
    - Metrics

Communication & Collaboration

- IM, VDO chats
- Confluence, wiki
  - Home page for the program
  - Team space for each Scrum team
  - Team space for Prod, PMO, Architects, Enterprise teams
  - Blogs, Contact details, Vacation plan
  - Anything and Everything goes there

Knowledge & Reuse

- Adopt Spotify model
  - Set up “Chapters” forums for each community
- Design processes & Guidelines
  - Conduct training to create awareness
  - Chapter forums for effective learning and continuous improvement



Infra & Ops

- Common code base, frequent auto builds, continuous integration
  - SVN, Jenkins
  - Sonarqube
- Weekly automated regression testing
- Automated deployment
  - INT to Staging to Pre prod

Metrics

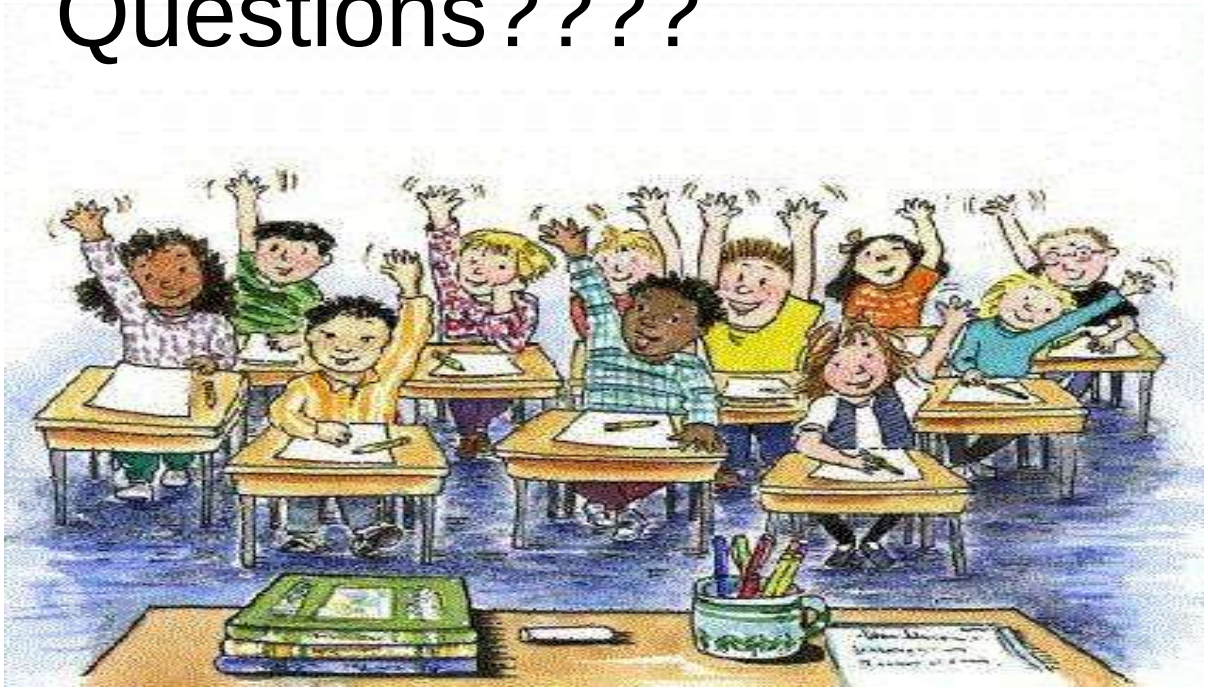
- Performance metrics
  - Release and sprint velocity
  - Velocity variance
  - Delivered business value
  - Effort utilization
- Product metrics
  - Code coverage and automation coverage
  - Defect leakage
  - Performance metrics
  - Build statistics/build efficiency
- CSAT

Summary & Conclusion

- Scaling practices are not easy to implement
- Sense of ownership and responsibility becomes loose
- Communication gets harder as more and more org layers get added
- Inter team dependencies only gets more & more complex
- Sprint Zero is definitely needed

- Start small as against big bang approach
- Involve teams on process improvements
- Invest in infrastructure and automation
- A combination of Kanban, Scrum and XP practices works well

Questions????



PERSISTENT
Partners in Innovation

Thank You

Pooja_wandile@persistent.co.in
pooja.wandile@gmail.com