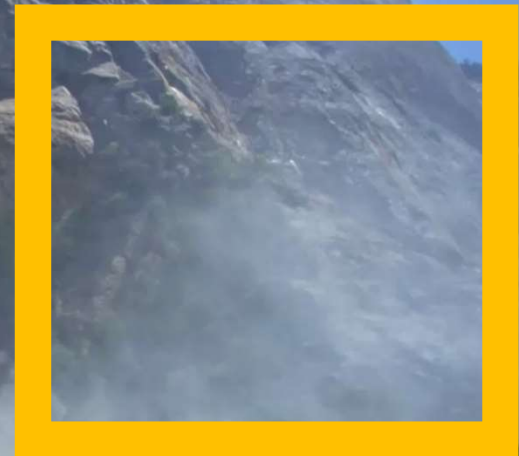


IS4301 Agile IT with DevOps – Lecture 2

Adjunct Professor Foong Sew Bun
Department of Information
Systems and Analytics
National University of Singapore



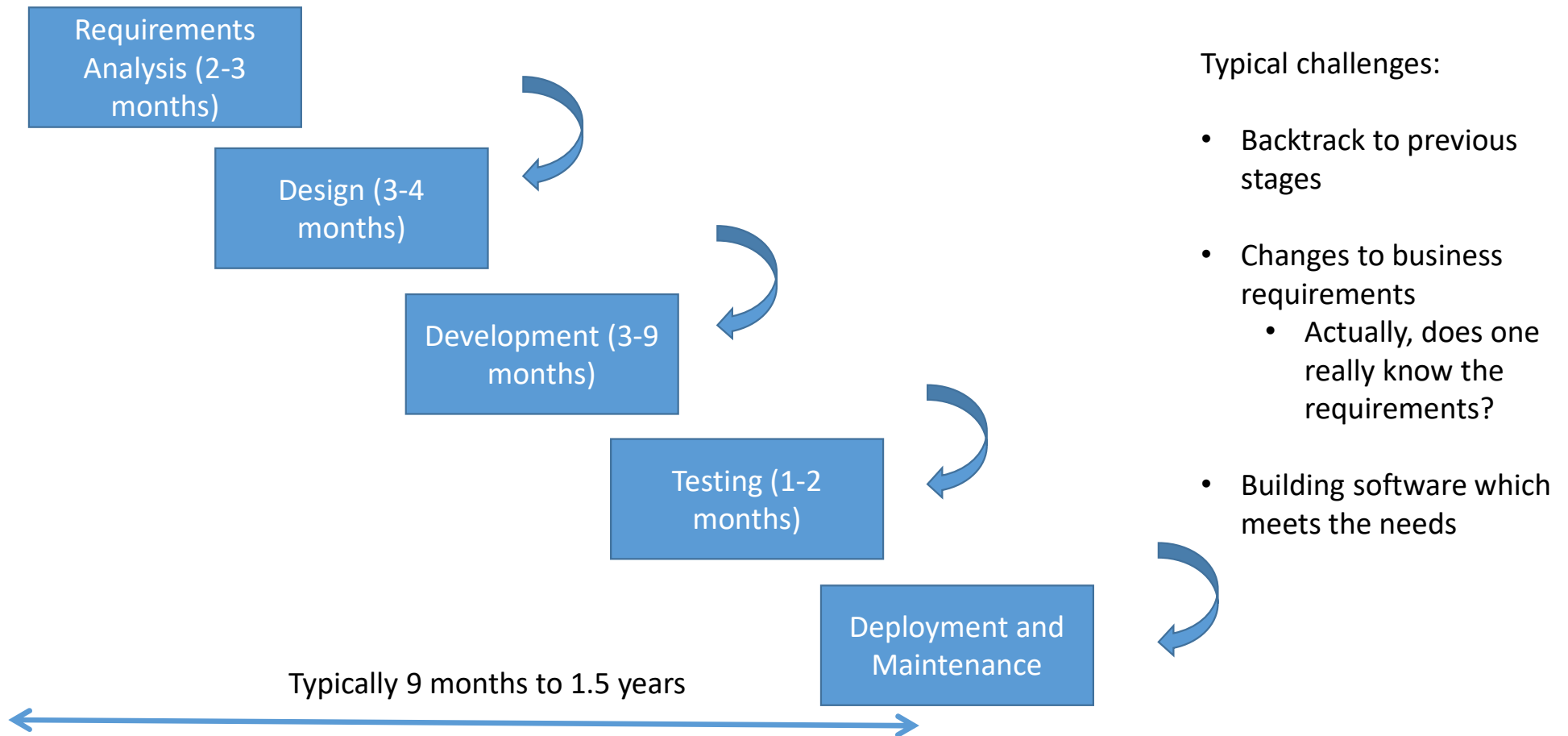


Learning Objectives

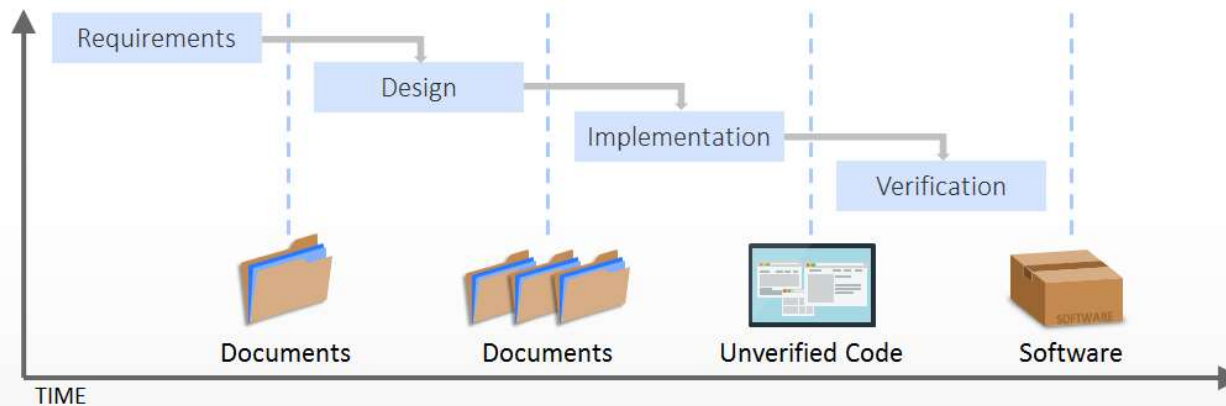
At the end of this lecture, you will understand:

- Understand agile IT in relation to traditional IT in digital transformation

Traditional Waterfall and Software Development

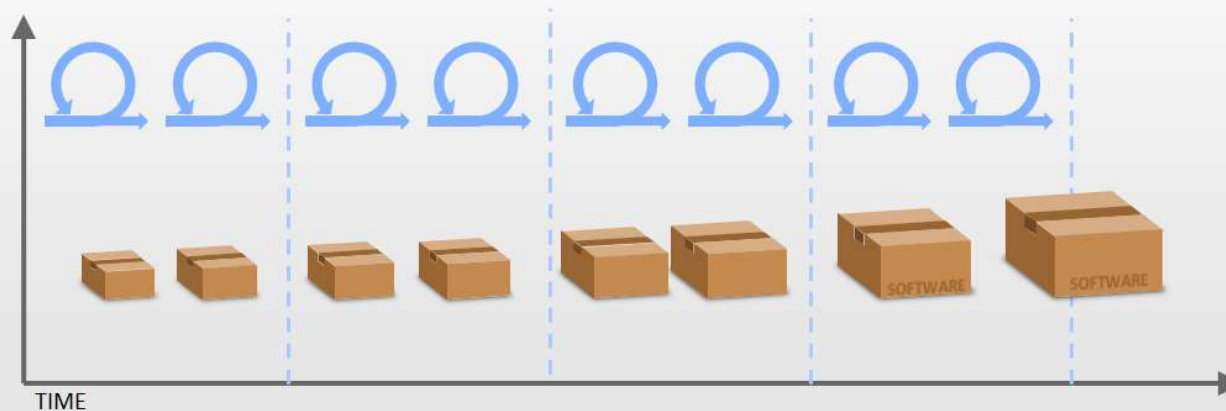


WATERFALL VS. AGILE METHODOLOGY



WATERFALL

Development of the software flows sequentially from start point to end point.



AGILE

Agile method proposes incremental and iterative approach to software design.

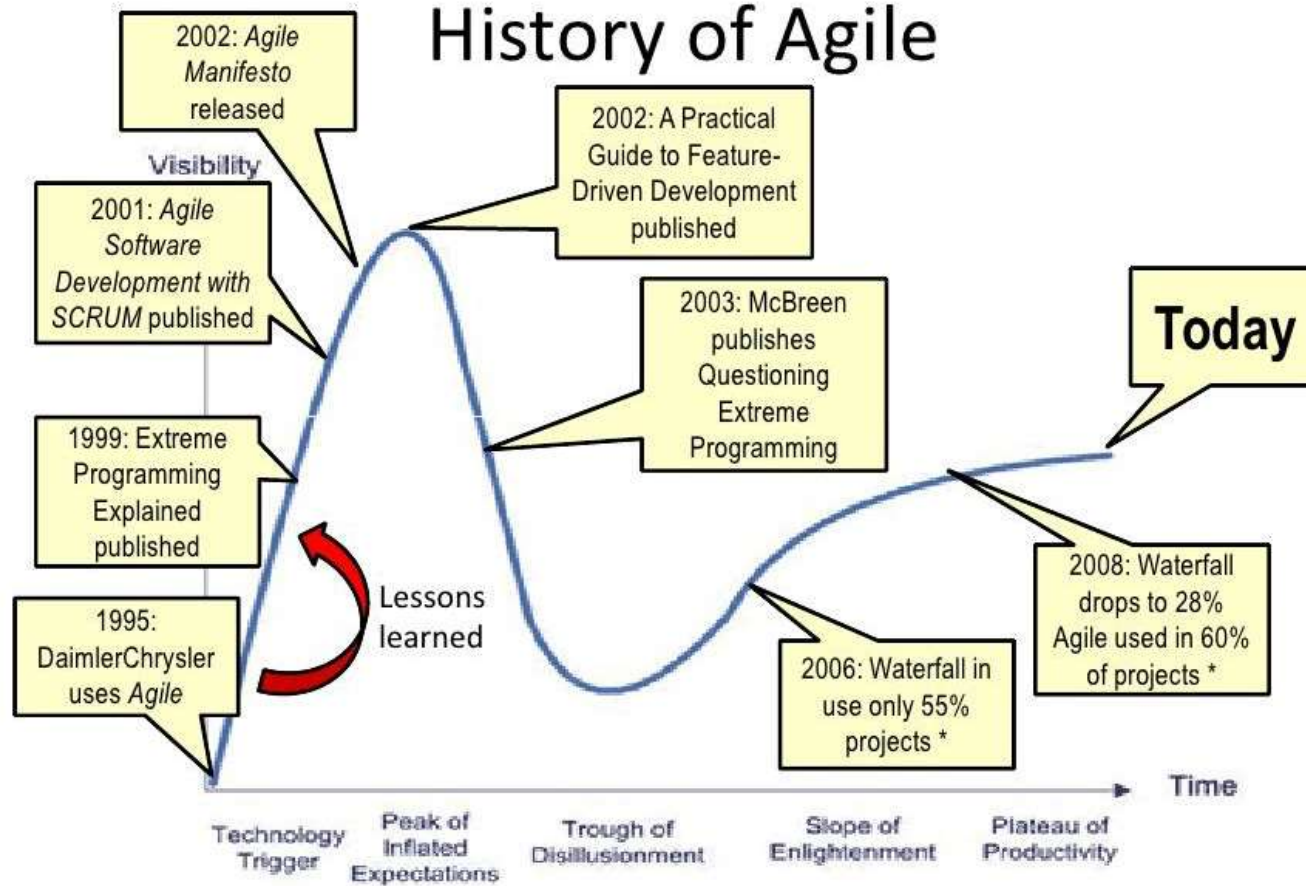


Agile and Digital Transformation

Need for iterative development,
need for objectives driven rather
than task driven

Agile is a collective term for
methodologies and practices which
evolved over past years to improve
quality, relevance, adaptability and
deliver greater value to businesses.

History of Agile





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

12 Principles Behind Agile Manifesto

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Business people and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done. 
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7. Working software is the primary measure of progress.
8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
9. Continuous attention to technical excellence and good design enhances agility.
10. Simplicity--the art of maximizing the amount of work not done--is essential. 
11. The best architectures, requirements, and designs emerge from self-organizing teams.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

Minimum Viable Product

HOW TO BUILD A MINIMUM VIABLE PRODUCT

NOT LIKE THIS



1



2



3



4

LIKE THIS



1



2



3



4



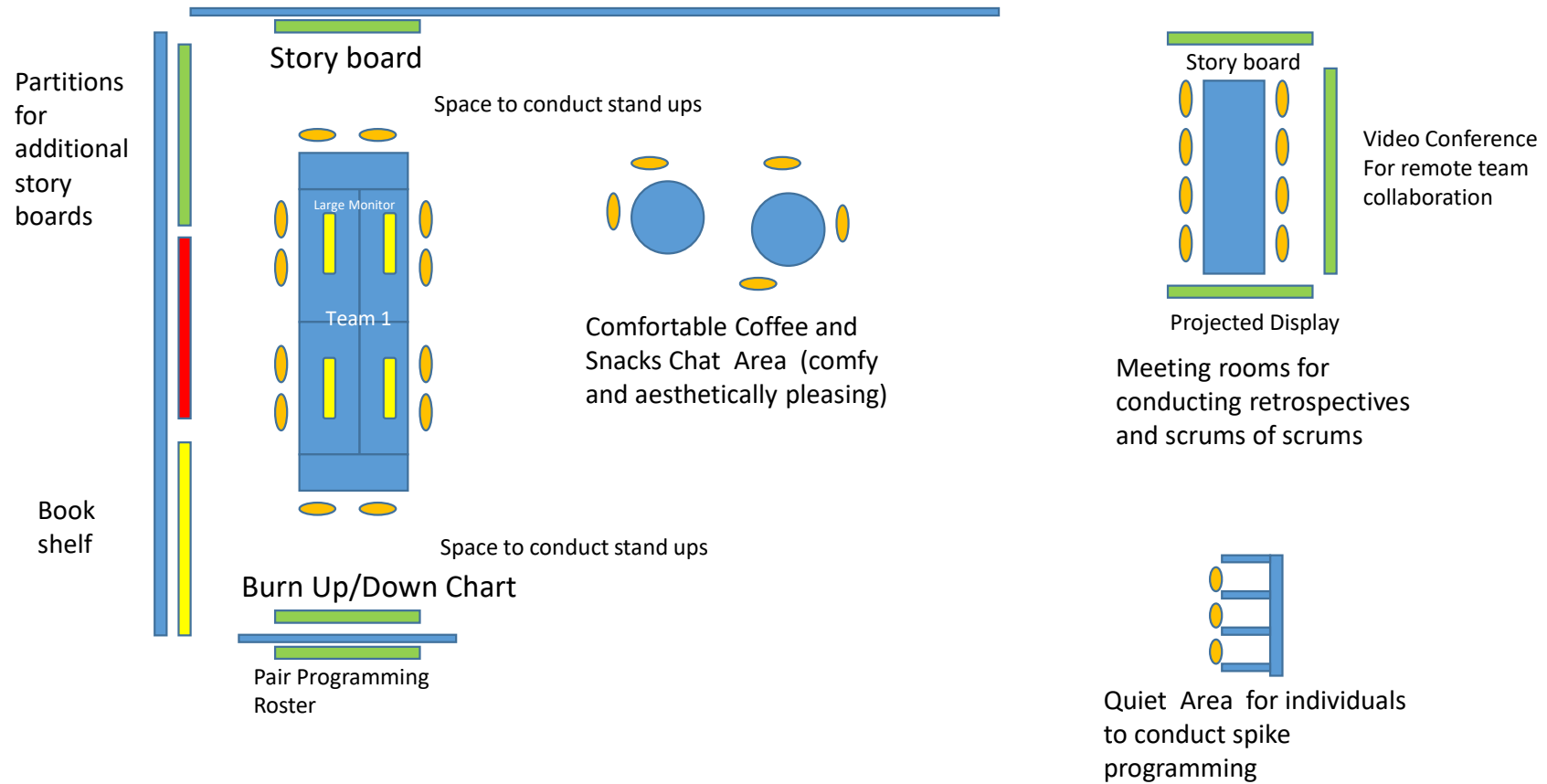
5

image by blog.fastmonkeys.com original idea: spotify product team

Bimodal Development and Delivery in a Large Enterprise, e.g., a Bank



Agile Information Workspace

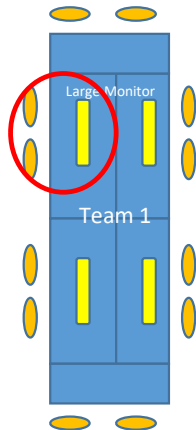


Physical Workspace Setup for Pair Programming



Large monitor

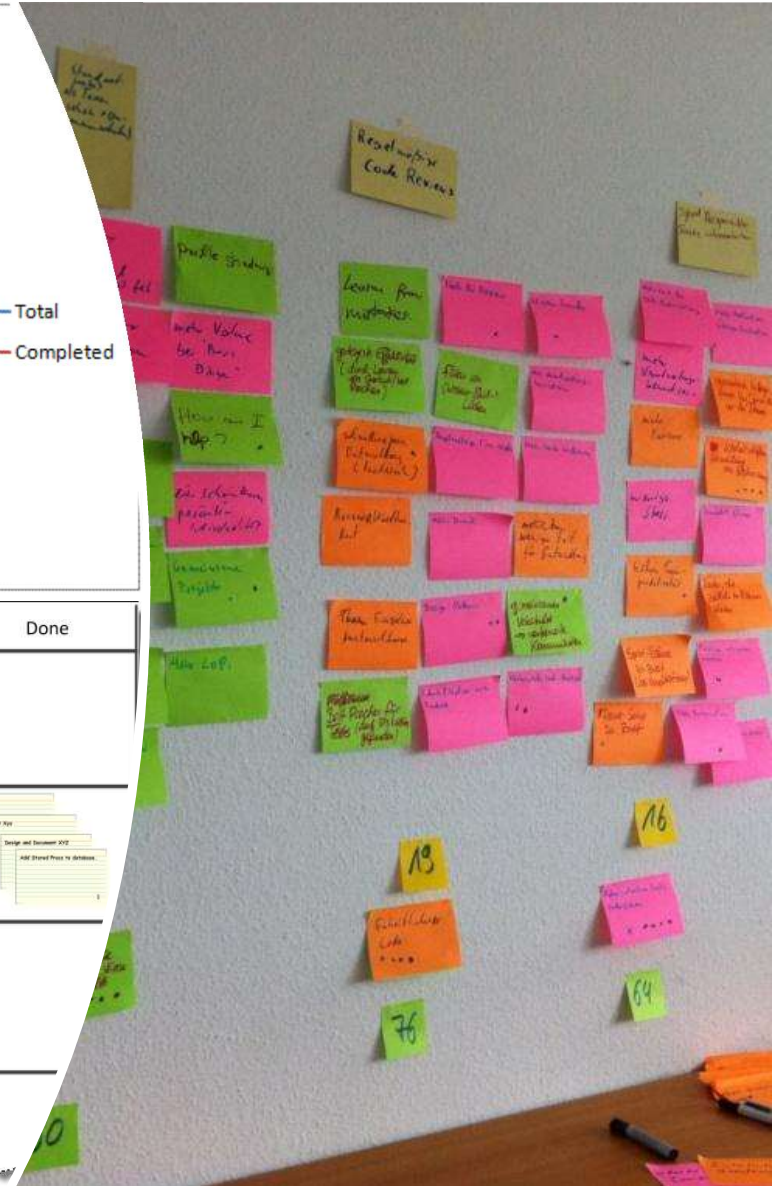
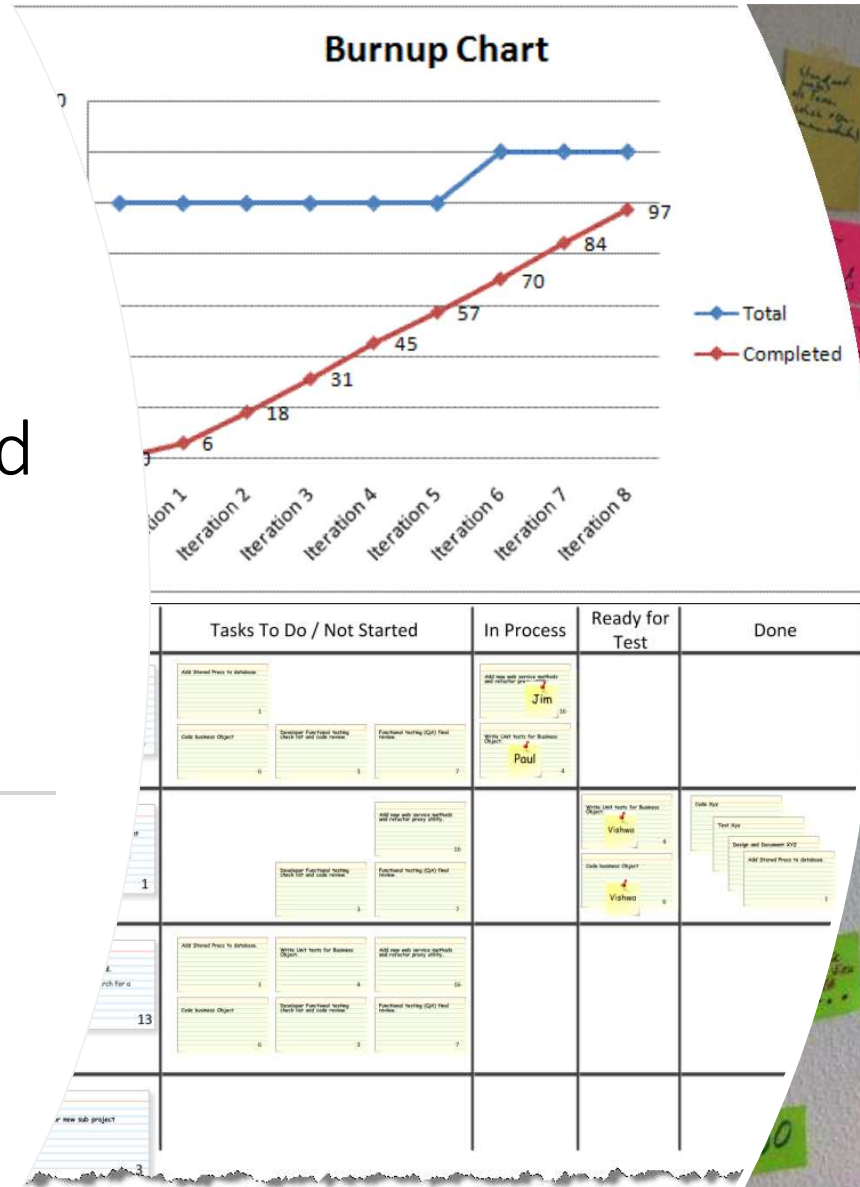
Detachable keyboard to swap between both easily, one being a tester and the other a developer



Examples of Workspace for Retrospectives



Examples of Story Boards and Burn Up Display Charts on Display Panels





Examples of furniture for agile team environment



Collaboration



Concentration



Comunication



Storage

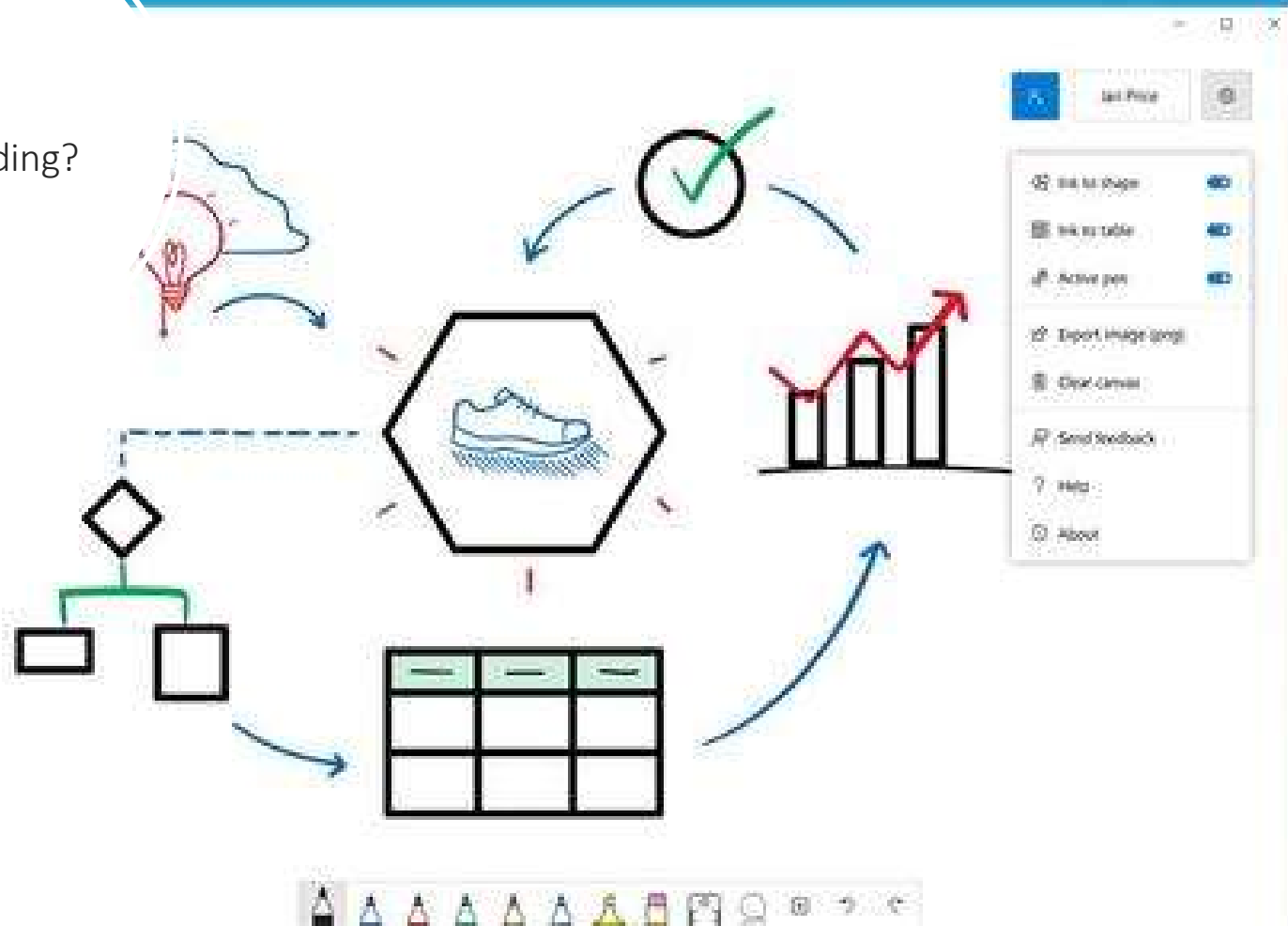
The image shows a large, open-plan office space designed for agile work. It features several clusters of light-colored wooden tables arranged in a way that encourages collaboration. Some tables are surrounded by red stools, while others have wooden chairs. The space is divided into smaller sections by glass partitions with dark frames. The floor is covered with a blue and white geometric patterned carpet. The ceiling is high with exposed ductwork and modern lighting fixtures. The overall atmosphere is bright and professional, typical of a modern tech or creative workspace.

Example of Collaborative Areas in Agile Workspaces

Agile Software Development in Hybrid Working?

Transform ink into perfect shapes and tables

Virtual
Whiteboarding?





Remote Pair Programming?