Defense Information Systems Agency
Department of Defense

Ready for Scrum?

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DISA T&E

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Presentation Tasks

Backlog	In Progress	Done
Scrum Overview		
Role of Testing in Scrum		
Agile Testing		
Summary		

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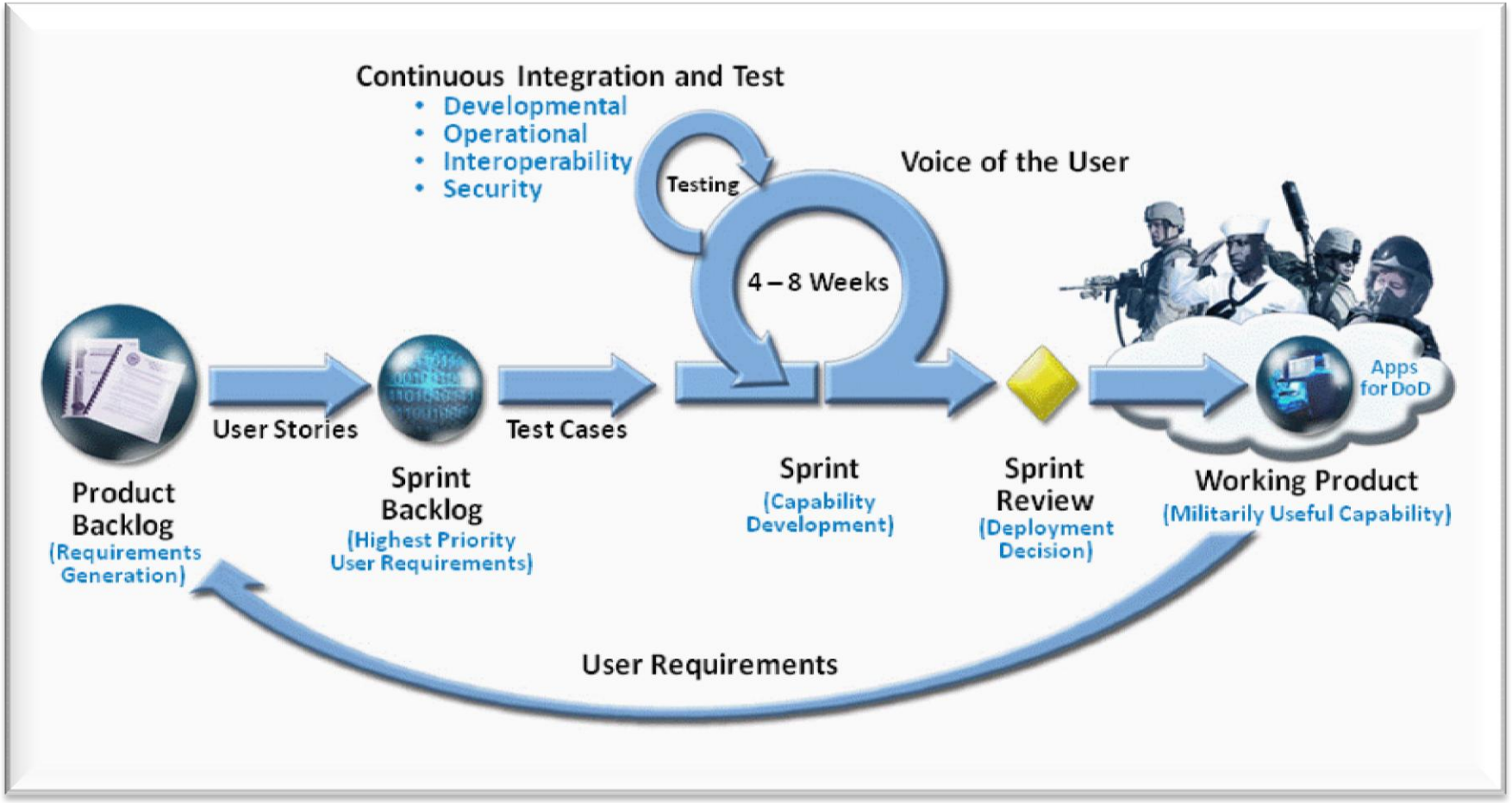
Scrum Overview



- Software development framework focused on delivering value according to customer priorities
- Delivers working software with fewer defects at a sustainable pace
- Removes impediments; teams self-organize and become “hyper-productive”

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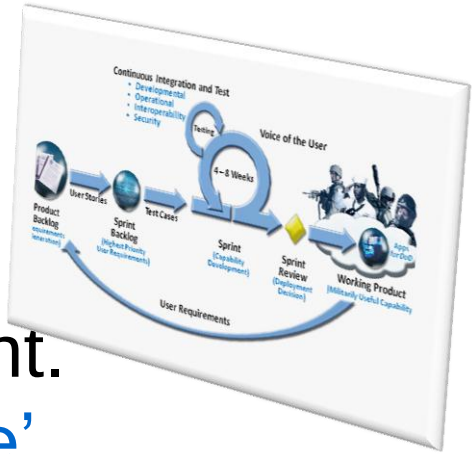
Why "Scrum"?



"This new emphasis on speed and flexibility calls for a different approach for managing new product development. The traditional sequential or 'relay race' approach to product development…may conflict with the goals of maximum speed and flexibility. Instead, a holistic or 'rugby' approach—where a team tries to go the distance as a unit, passing the ball back and forth—may better serve today's competitive requirements."

Takeuchi and Nonaka, "The New New Product Development Game," *Harvard Business Review*, January 1986.

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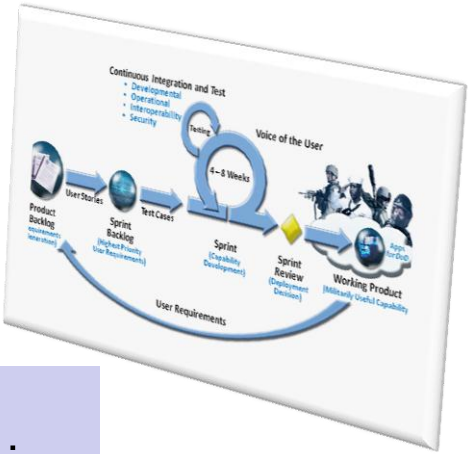
"Agile Manifesto"



individuals and interactions	over	processes and tools
working software	over	comprehensive documentation
customer collaboration	over	contract negotiation
responding to change	over	following a plan

www.agilemanifesto.org

"While there is value in the items on the right, we value the items on the left more."

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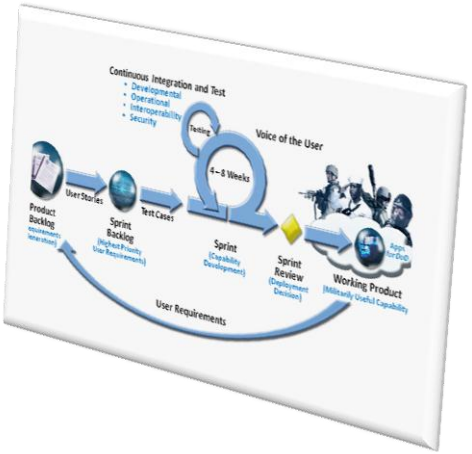
Key Features of Scrum



- Highly collaborative
- Documentation light
- Change resilient
- Fundamentally different requirements process
- Short duration development cycle: “Sprint”
- Continuous integration and testing
- Focused on priority needs of the customer: the Warfighter

Agile is about delivery of capability at “speed of need.”

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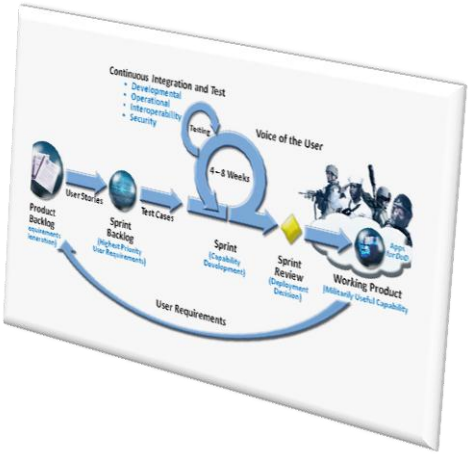
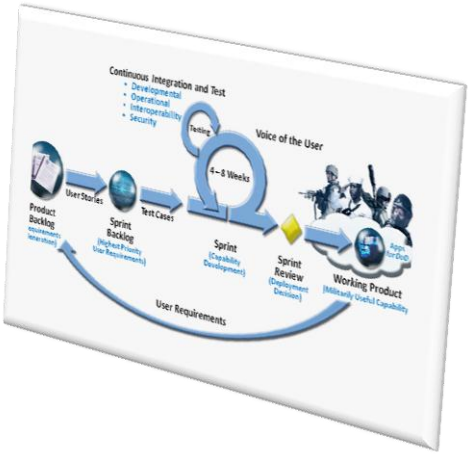
3 Key Roles in Scrum



- Product Owner
  - define product features
  - prioritize features; adjust at each sprint
  - accept/reject sprint product
- Team
  - cross-functional, self-organizing
    - programmers, users, testers
  - membership does not change during sprints
- Scrum Master
  - enable collaboration across all roles and functions
  - ensure team productivity - remove impediments!

Inspect and Adapt

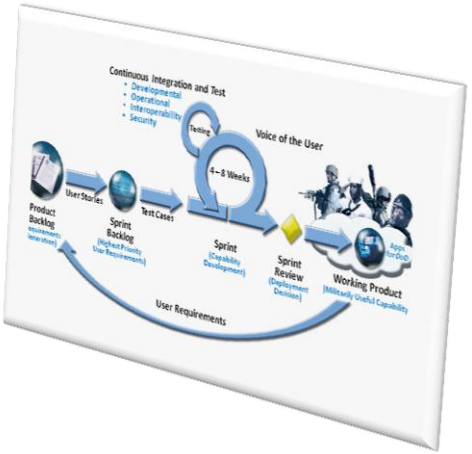
The Product Backlog



- Requirements document
  - *not* a CDD
- Prioritized list of desired features
  - product Owner prioritizes
  - stated as “user story”
    - as a ___, I want to ___, so that I can ____
    - A ***Mission Thread*** likely consists of multiple user stories
- Continuously updated and re-prioritized
  - features added and removed to reflect customer needs

A high-priority user requirement may be just *one sprint away* from delivery

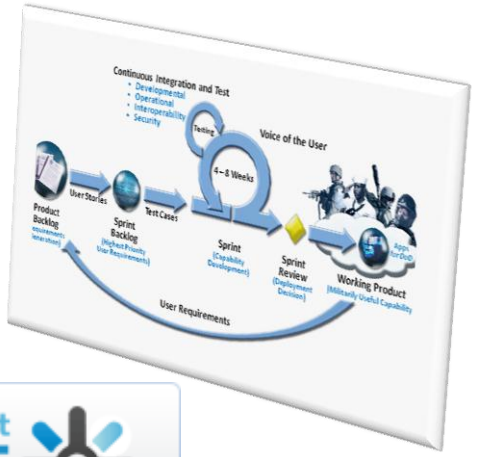
The Sprint



- Time-boxed development period
  - design, code, test
  - sustainable pace
  - “Sprint backlog”
  - highest priority features from product backlog
  - no changes (new features) during Sprint
- Test Driven Development
  - user stories translated into Test Cases
    - testing the capability as it is intended to be used
  - early involvement!

Outcome: potentially deployable capability

Continuous Integration and Test



- Testing is a shared resource
  - DT, OT, interoperability, security
  - continuous user involvement
  - one team!
- Reciprocity
- Risk-based, mission focused
- Maximizes use of test automation
  - virtualization
- Lightweight documentation: shift emphasis from TEMP to Test Cases

Do not sacrifice rigor in Agile testing

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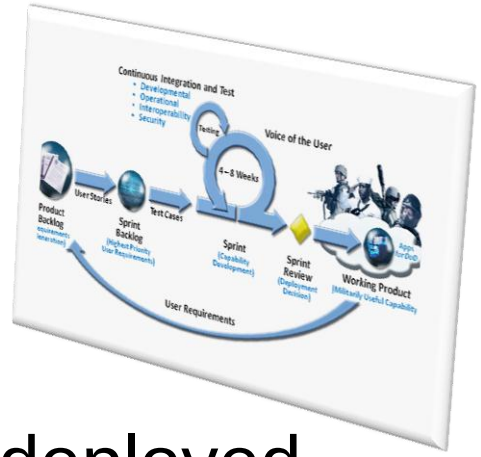
Sprint Review



- Deployment decision
  - not an FDDR
- Demo to stakeholders
- Working capability is eligible to be deployed
  - product owner, stakeholders decide
  - can be improved in subsequent sprint
  - defects returned to the product backlog
- Testers take on “continuous monitoring” role for deployed capability

Capability deployment: start small, scale rapidly

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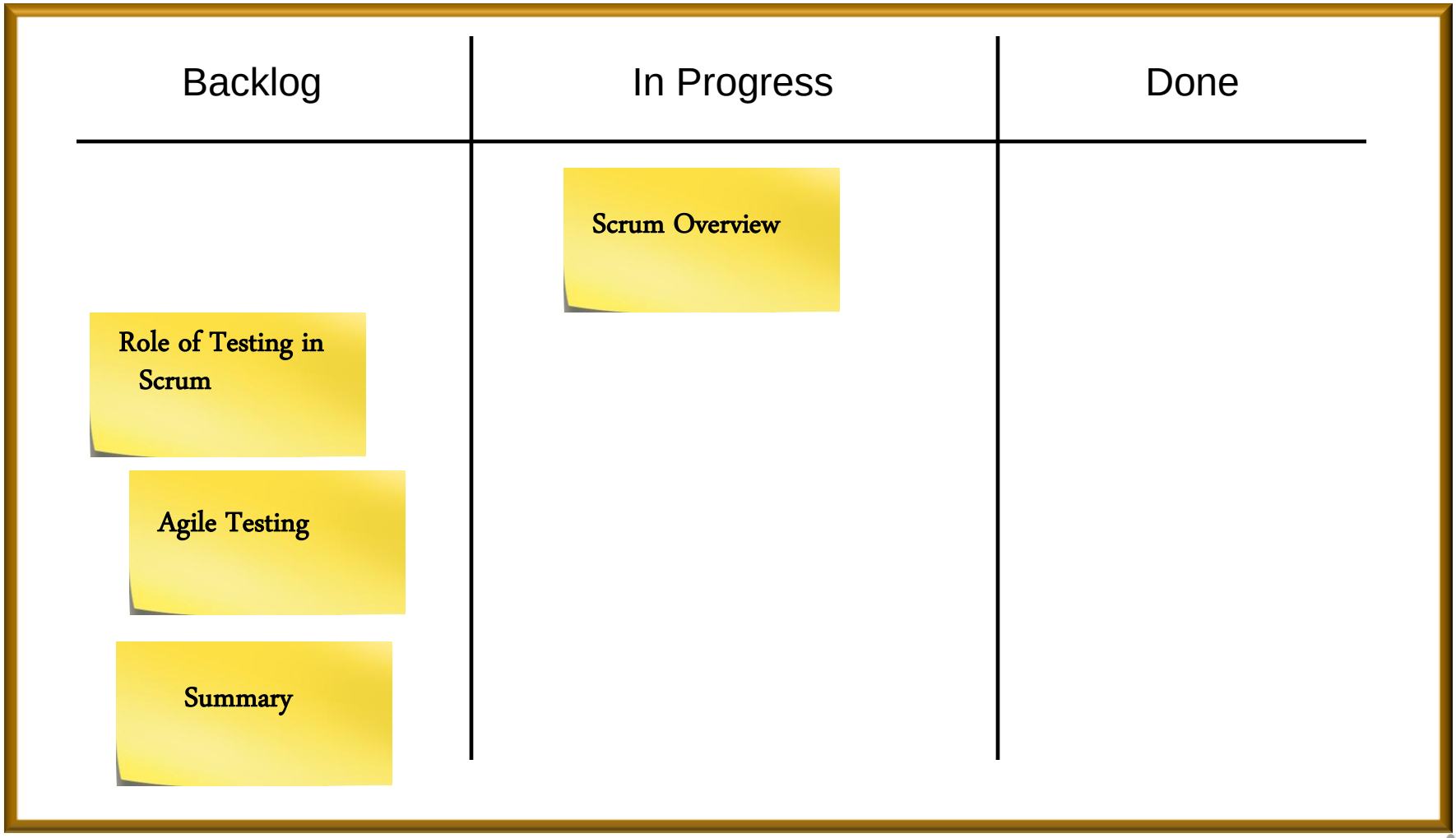
Task Board



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Role of Testing in Scrum

If you think you're going to show up at the end and run a test, think again.

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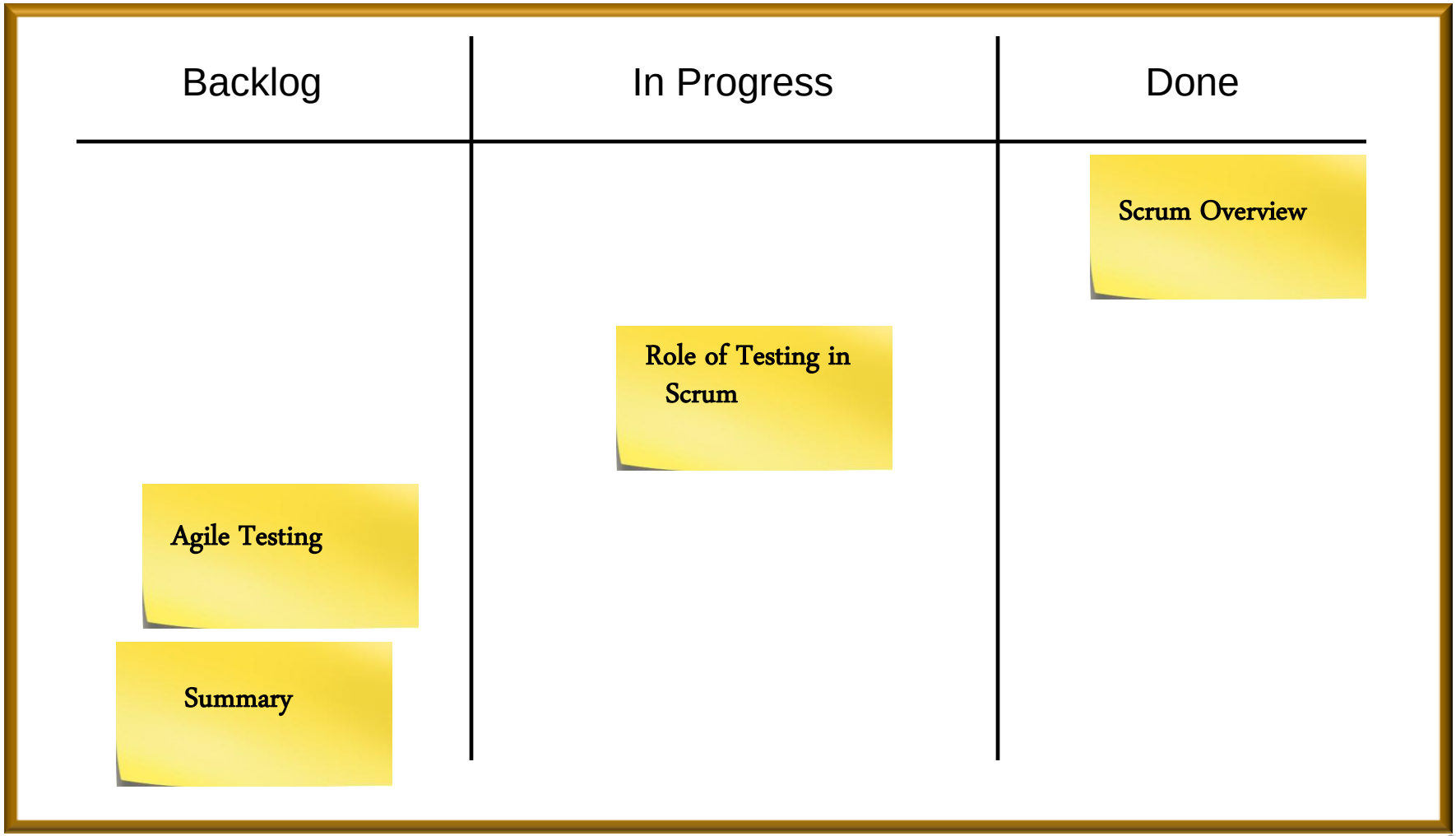

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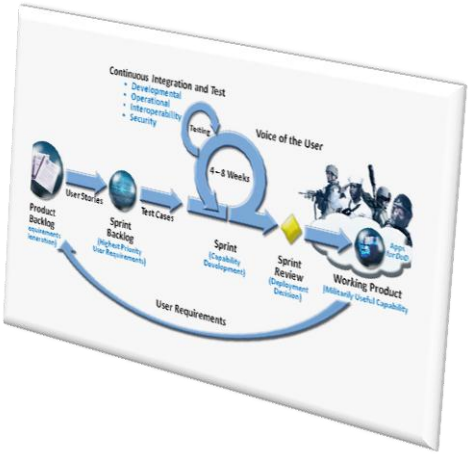
What is Agile Testing?



- Is not testing on an Agile project
- "Early Tester Involvement"
  - drive development
- One team – no tester silos
  - customer focused
- Collaborative
  - with developer, customer
  - not "quality police"

"Unfortunately, customers aren't generally good at articulating their requirements. Driving development with the wrong tests won't deliver the desired outcome.

Crispin and Gregory, *Agile Testing*

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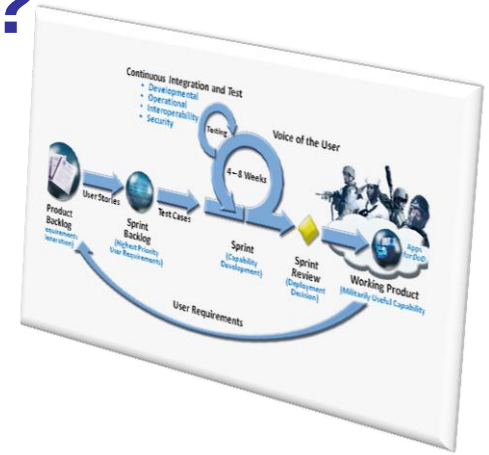
What Makes Agile Testing Different?



- Not a “phase” at the end
  - Can’t test quality into the product
- Much earlier in the process
  - Coding and testing are integrated
    - A user story is not “done” until it has been tested
  - Drives a culture of feedback and improvement
    - Not a gatekeeper
- Lightweight process
  - Less documentation reliant
- Employs more automation

We define an agile tester this way: a professional tester who embraces change, collaborates well with both technical and business people, and understands the concept of using tests to document requirements and drive development.

Crispin and Gregory, *Agile Testing*

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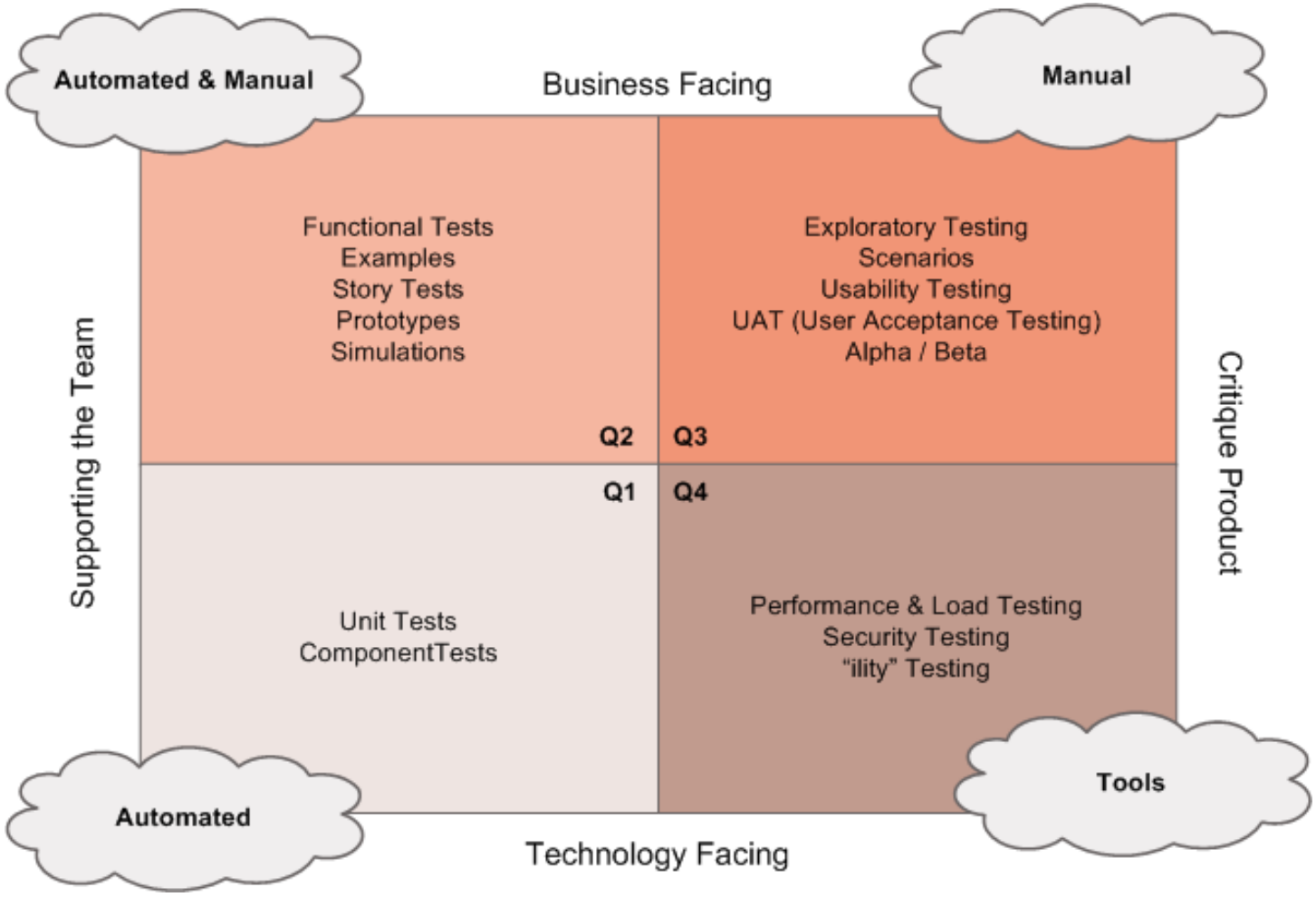
Agile Testing Quadrants



The Agile Testing Quadrants
Original idea by Brian Marick, www.exampler.com

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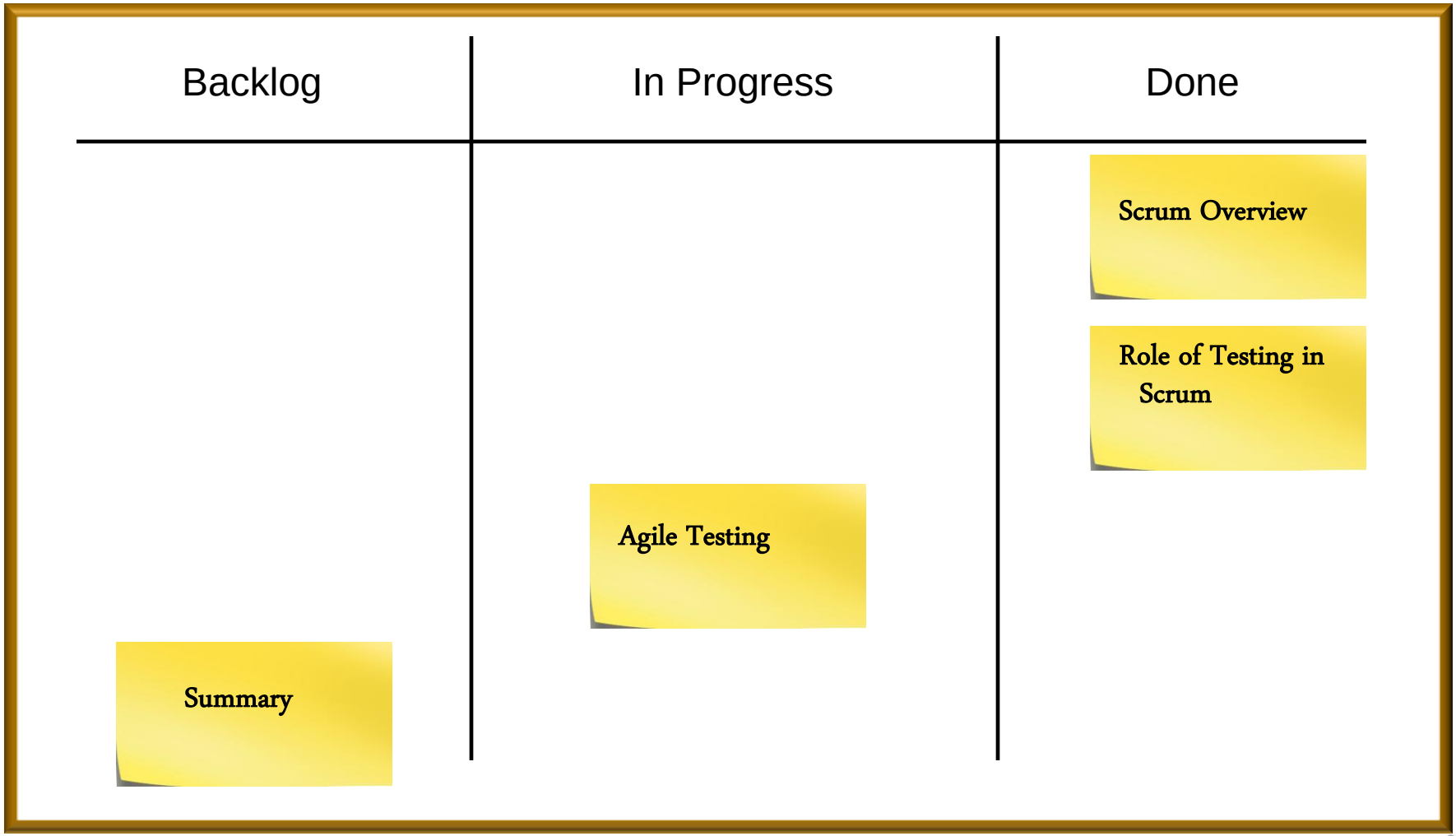
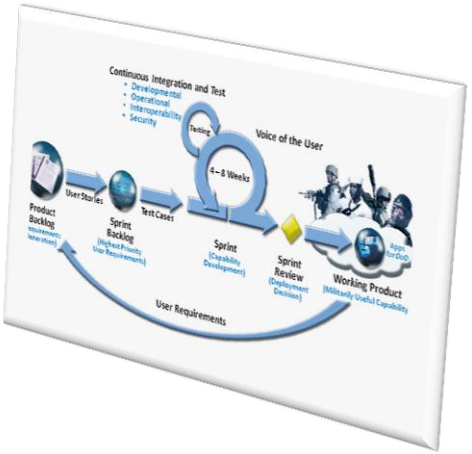


Challenges



- Test as a Service
  - On demand
- Persistent environment
  - Federate capabilities
  - Virtualize
- Education and training
  - PMs and Testers
- Agile DIACAP, Interoperability, oversight
- Community of Interest User base

Shift the paradigm: testing as *an enabler*
of improved acquisition outcomes

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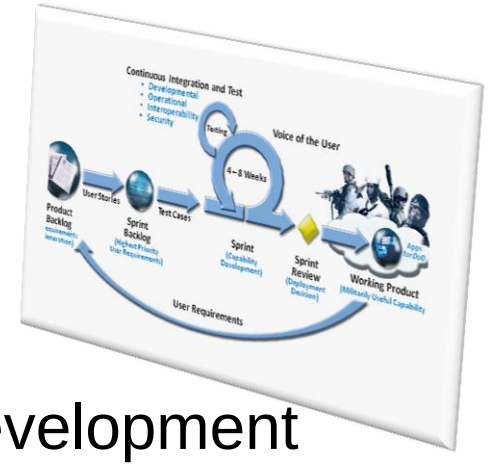
Summary



- New IT Acquisition model is coming
- TE&C processes must adapt
  - Responsive to iterative, incremental development
  - Responsive to *User* priorities
  - High optempo
- Dramatically reduced TE&C timelines

Objective: rapid fielding of enhanced IT capabilities to the Warfighter

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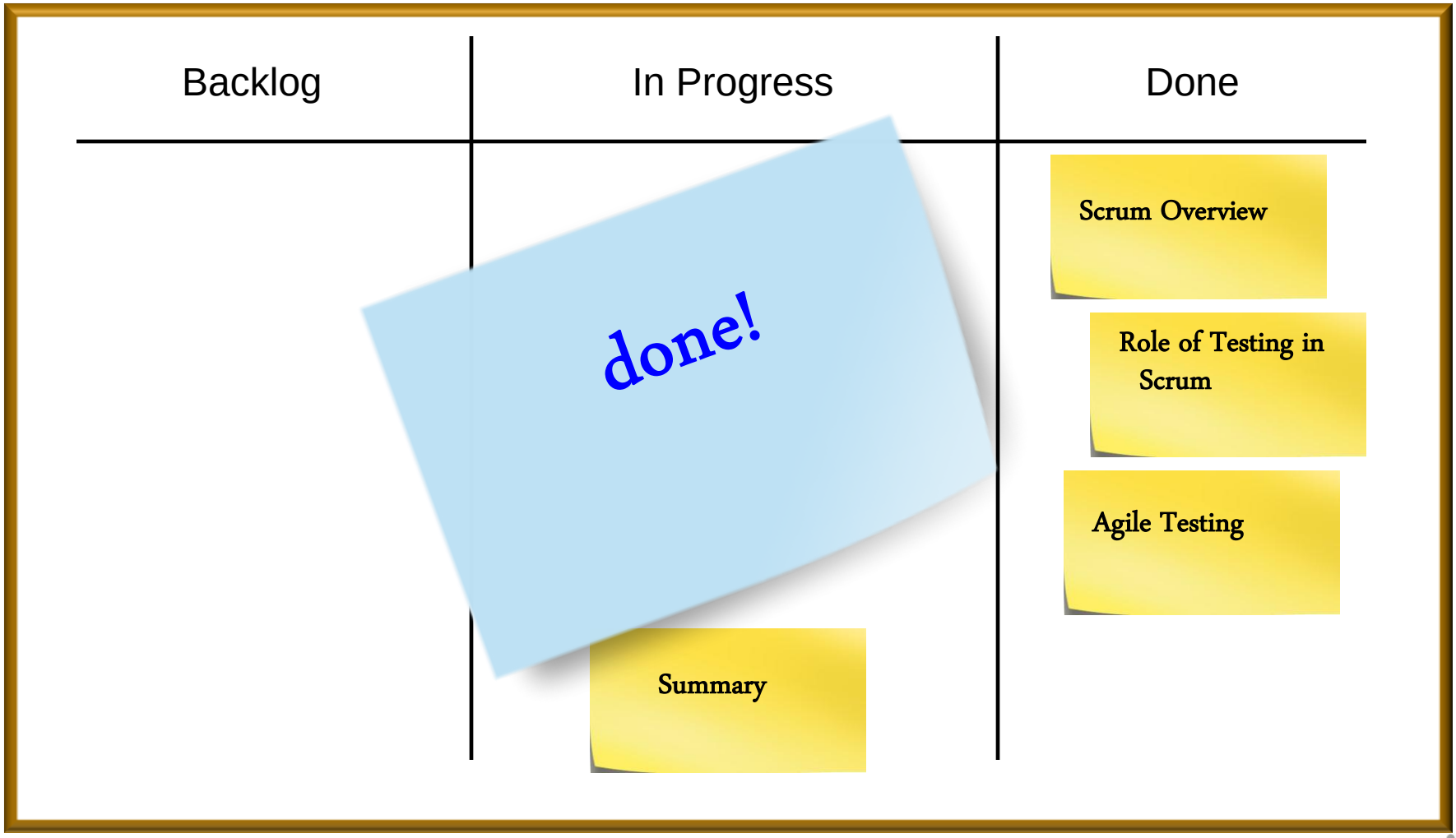


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