Agile

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Agenda

- Introduction to Agile
- Scrum & Kanban
- Scrum Life Cycle
- Scrum Team players
- Agile Practices
- Epic, User stories, Sprints
- Retrospective, Review, Planning, Daily stand up
- Agile Estimates [Story Points]

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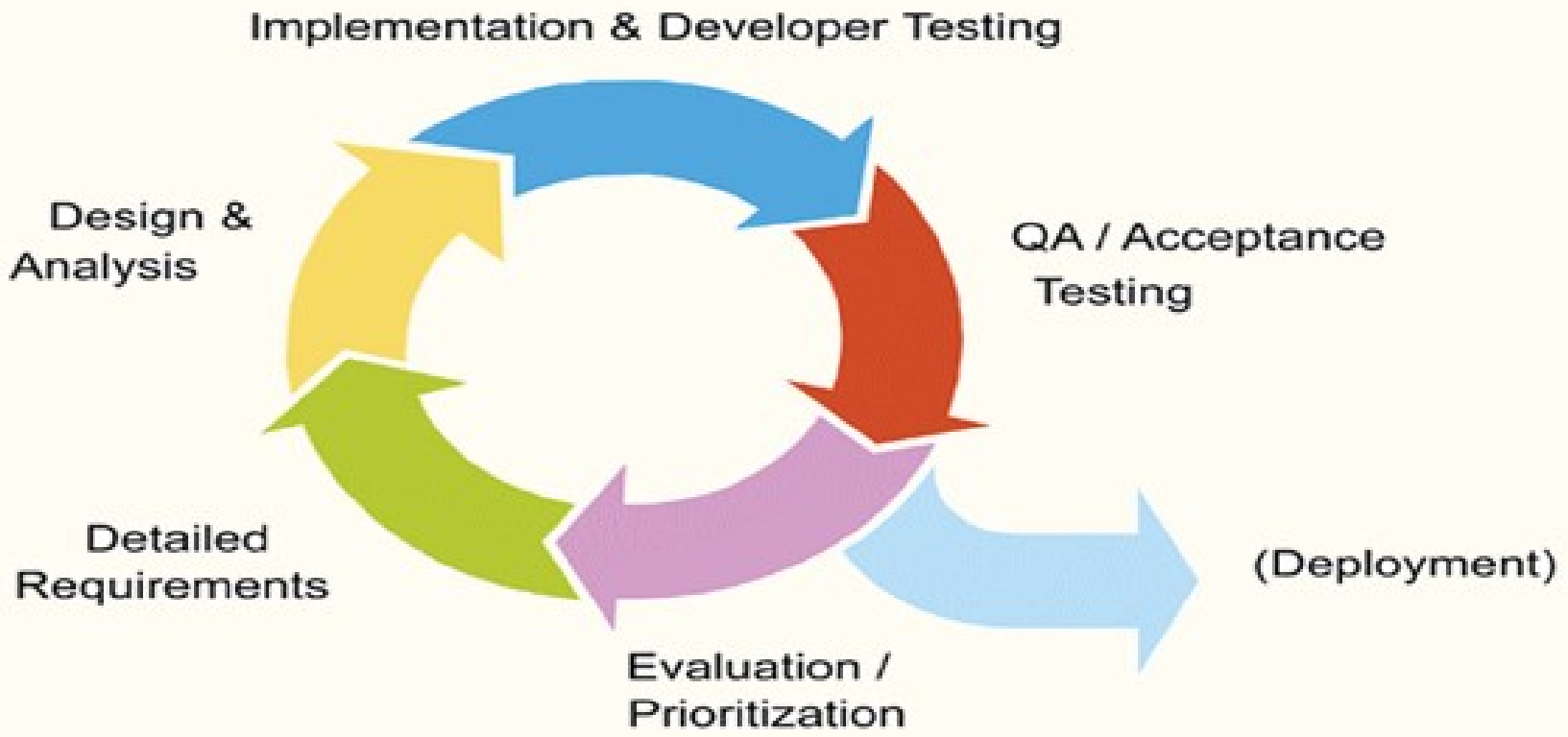
What is Agile

- Agile is all about
  - adaptive planning
  - evolutionary development
  - early delivery
  - continuous improvement
  - it encourages rapid and flexible response to change
- AGILE is a methodology that has **continuous iteration** of development and testing throughout the software development life cycle of the project.

Agile SDLC

Details of Iterations



Agile Methods

- Kanban
- Scrum
- Adaptive software development (ASD)
- Crystal Clear methods
- Disciplined agile delivery
- Dynamic systems development method (DSDM)
- Extreme programming (XP)
- Feature-driven development (FDD)
- Lean software development

Scrum & Scrum players

- A flexible product development strategy where a development team works as a unit to reach a common goal
- Team includes -
  - **Scrum Master**
    - Master is responsible for setting up the team, sprint meeting and removes obstacles to progress
  - **Product owner**
    - The Product Owner creates product backlog, prioritizes the backlog and is responsible for the delivery of the functionality at each iteration
  - **Scrum Team**
    - Team manages its own work and organizes the work to complete the sprint or cycle

Scrum vs Kanban

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Scrum	Kanban
Pre-defined roles of Scrum master, Product owner and team member	No prescribed roles
Time boxed sprints	Continuous Delivery
Work is pulled through the system in batches (the sprint backlog)	Work is pulled through the system (single piece flow)
No changes are allowed mid-sprint	Changes can be made anytime
Velocity is the matric	Cycle time is the matric
More appropriate in situations where work can be prioritized in batches that can be left alone	More appropriate in operational environments with a high degree of variability in priority
Stories(tasks) needs to be broken down to achieve completion of the sprint	No particular task size needs to be defined

Core Values of Agile

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

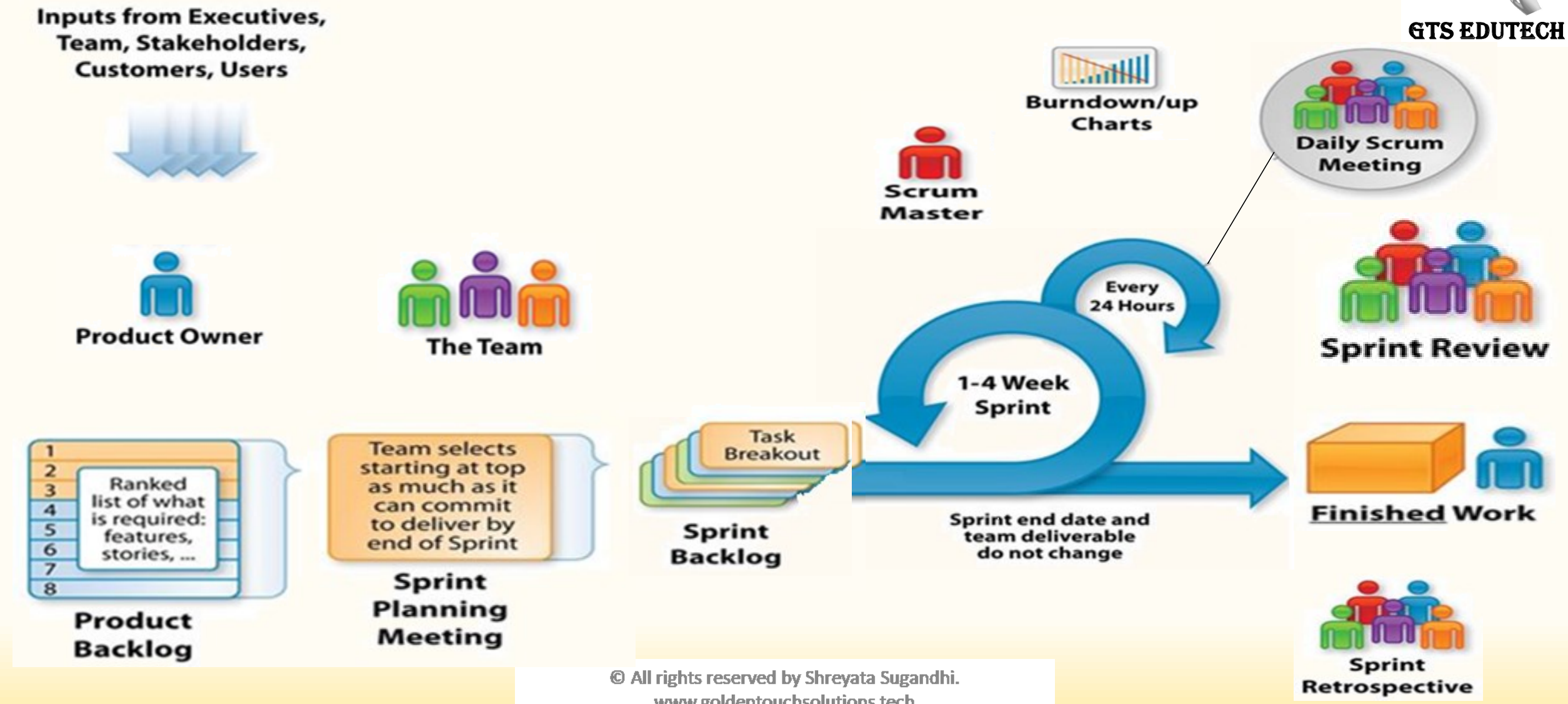
Agile Practices

- Acceptance test-driven development (ATDD)
- Test-driven development (TDD)
- Agile testing
- Agile modeling
- Behavior-driven development (BDD)
- Continuous integration (CI)
- User story
- Backlogs (Product and Sprint)
- Domain-driven design (DDD)
- Information radiators (scrum board, task board, visual management board, burndown chart)
- Iterative and incremental development (IID)

Agile Practices

- Pair programming
- Planning poker
- Refactoring
- Scrum events (sprint planning, daily scrum, sprint review and retrospective)
- User Story Mapping
- Business analyst designer method (BADM)
- Cross-functional team
- Story-driven modeling
- Retrospective
- Velocity tracking
- Timeboxing

Scrum Cycle



Scrum Stand Up

Stand up

- Stand up is a status update meeting.
- Meeting should not last more 15 minutes
- Each team member is expected to answer 3 questions
  - What I have accomplished yesterday?
  - What I will accomplish today?
  - What are impediments?

Sprint Planning

- Sprint Planning meeting is conducted for backlog refinement, goal setting for the sprint and respective acceptance criteria
- It is time bound meeting
- Participants in the meeting are product owner, ScrumMaster and the entire Scrum team

Sprint Retrospective

- The retrospective includes three main questions for discussion:
  - What went well during the sprint cycle?
  - What went wrong during the sprint cycle?
  - What could we do differently to improve?

Sprint Review

- At the end of each sprint, a sprint review meeting is held.
- During this meeting, the Scrum team shows what they accomplished during the sprint.
- Participants of the sprint review includes
  - the product owner
  - the Scrum team
  - the Scrum Master
  - management
  - customers
  - developers from other projects.

Estimates in Scrum

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- Estimates in Scum will be done using story points
- Efforts will be measured into Story points as
  - 32
  - 16
  - 8
  - 4
  - 2
    - Whereas, generally story points are mapped to the time as

      2 story point = 0.5 hrs

      Or

      2 story points = 2 hrs

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