Managing Time & Cost

⇒ Agile practices support both strategic & tactical schedule & time management.

(a) · Early planning (Product Roadmap, Product Backlog) is STRATEGIC

(b) Detailed planning for each Release & each sprint is TACTICAL

In Release planning → We plan release to match a specific Date with minimal features

· or We can plan release with enough time to create specific set of features

In Sprint planning → We estimate time in Hours to complete individual tasks for each of requirement.

→ We use Sprint Backlog to manage detailed time allocations throughout the sprint.

(c) We use scrum team's velocity to fine tune scheduling.

⇒ We must know team's velocity to determine, how much functionality an agile team can deliver.

⇒ Velocity is measured as number of User Story points that the development team completes in each sprint.

User story is simple description of a product requirement.
User story points are relative numbers that describe the amount of effort required to develop a user story

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⇒ Once we know the team's velocity, we can use it as a long range planning tool.

⇒ Velocity help us to forecast how long the scrum team will take to complete a certain number of requirements & how much a proj may cost

⇒ We measure velocity from sprint to sprint.

⇒ Velocity is a post-sprint fact, not a goal

(If velocity turns into a target rather than a past measurement, scrum teams may be tempted to exaggerate estimated story points to meet that target), Thus rendering velocity Meaningless

CALCULATING VELOCITY

⇒ At the end of each sprint, the scrum team looks at the requirements it has finished & adds up the no. of story points associated with those requirements.

⇒ The Total number of completed story points is the scrum team's velocity for that sprint.

⇒ Average Velocity is the total number of story points completed, divided by the total no. of sprints completed.

for example
Sprint 1 ⇒ 15 points
Sprint 2 ⇒ 13 " — "
Sprint 3 ⇒ 16 " — "
Sprint 4 ⇒ 20 " — "
Total ⇒ 64 points

Average Velocity = 64/4
= 16

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Using Velority to estimate the Project Timeline

(1) Add up the no. of story points for the remaining requirements in the product backlog

(2) Determine the no. of sprints you will need by dividing the number of story points remaining in the product backlog by the velority.

⇒ For a pessimistic estimate ⇒ Use the lowest Velority

⇒ For an optimistic estimate ⇒ Use the highest Velority

⇒ For a most likely estimate ⇒ Use the average Velority

⇒ For a most likely estimate ⇒ use the [illegible]

(3) Determine how much time it will take to complete the story points in the product backlog by multiplying sprint length by the no. of remaining sprints

Time reqd = sprint length X No. of remaining sprints

for ex. remaining story points = 800

Averag Velocity = 20 points/sprint

no. of sprints needed = 800/20 = 40 sprints

Time reqd = 02 weeks X 40 sprints

= 80 weeks

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⇒ Velocity differs from sprint to sprint..

⇒ As the project progresses, velocity should increase

Increasing Velocity

For · 800 story points in product backlog & · 20 story point as Avg velocity.] · 40 sprints / 80 weeks

(a) Increasing velocity to · 23 story points · ⇒ 35 sprints · / 70 weeks

(b) " " · 26 " " ⇒ 31 sprints / 62 weeks

(c) " " · 31 " " ⇒ 26 sprints / 52 weeks