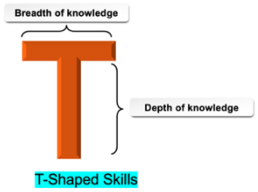
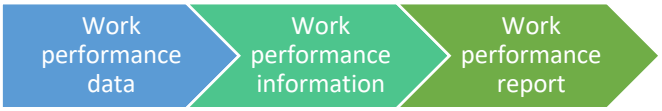
DOMAIN I: PEOPLE

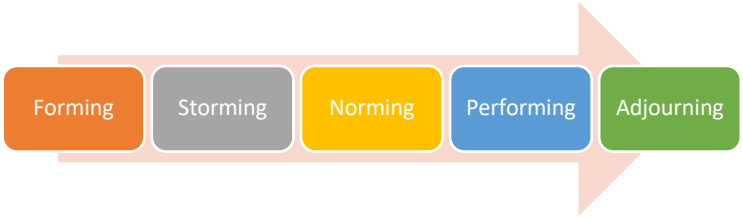
Lesson 1: Creating a high performing team

- T-shaped Skills
- RACI
- Focus groups
- Project charter vs. Team charter
- Ground rules/Social contract





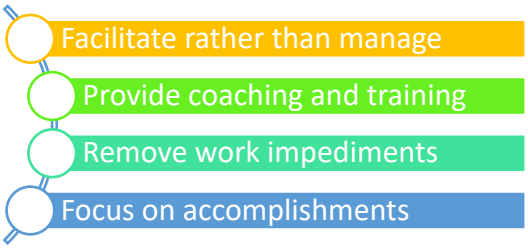
- User Story, Definition of Ready, Acceptance Criteria, Definition of Done
- Absolute time estimate (3-point estimating) vs. Relative measure (Planning poker, Story pointing and T-shirt sizing)
- Resource management plan includes training plan and recognition plan.
- Training, Paring, Mentoring, Baselining
- Face-to-face communication in virtual team, Fishbowl window
- 5 stages of Tuckman model:



- 4 backlog prioritization techniques: Kano, MoSCoW, Paired Comparison, 100 Points
- 4 Agile ceremonies: Sprint Planning, Daily Standup, Sprint Review, Sprint Retrospective
- 4 techniques to get consensus: Fist of Five, Roman voting, Polling, Dot voting
- 2 techniques for establishing a shared vision: XP metaphor, Product box exercise
- 4 codes of ethics: Responsibility, Respect, Fairness and Honesty

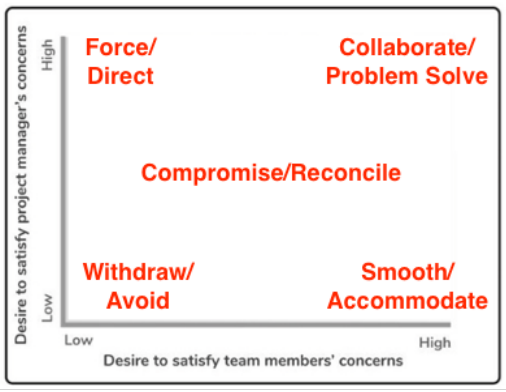
Lesson 4: Keeping the team on track

- 4 Characteristics of Servant Leadership:



- 3 Stakeholder Classification Tools: power grid, salience mode and stakeholder cube
- 6 Performance Report Types

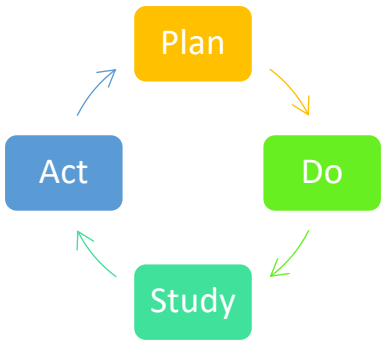
- Value Stream Map
- 5 Conflict Management Approaches:



- 5 Elements of Emotional Intelligence: Self-awareness, Self-regulation, Motivation, Empathy, Social Skills
- 4 Organizational Theories: Maslow, McGregor, McClelland, Herzberg
- Halo affect

DOMAIN III: BUSINESS

- 4 common compliance categories: regulatory, quality, legal, process
- Tolerances and Escalation procedures
- 4 common benefit management techniques: Net Promoter Score, A/B Testing, Decision Tree Analysis, Monte Carlo Analysis
- 4 Types of Organizational Structures: Functional, Project oriented, Matrix, Composite
- 3 types of PMO: Supportive, Controlling, Directive
- Organizational Process Assets (OPAs) vs. Enterprise Environmental Factors (EEFs)
- Kaizen vs. Deming cycle (P-D-C-A or P-D-S-A)



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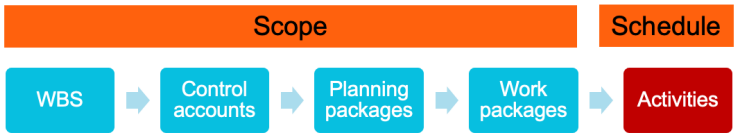
DOMAIN II: PROCESS

Lesson 2: Starting the project

Scope

- Requirement Management Plan vs. Scope Management Plan
- Elicitation techniques:
  - 4 Decision Making techniques: Unanimity, Majority, Plurality, Autocratic
  - Mind mapping vs. Affinity Diagram
  - Prototypes vs. Storyboarding
- Scope Baseline:
  - 3 steps: Requirement documentation -> Scope statement -> WBS
  - 5 components: Scope statement, WBS, WBS Dictionary, Planning package, Work package
- Scope creep

Schedule



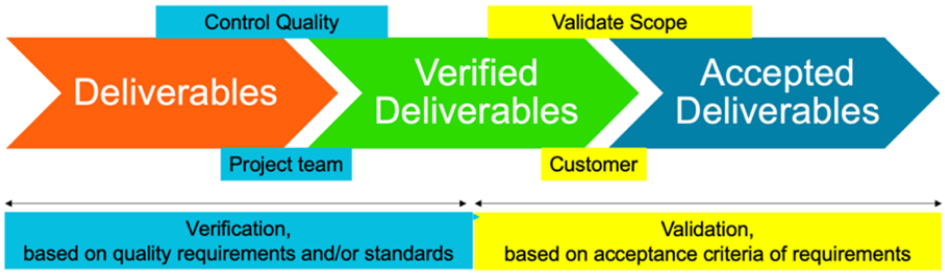
- 4 types of activity dependencies: Mandatory, Discretionary, External, Internal
- 4 types of relationship: FS, SS, FF, FS
- 3 schedule formats: Milestone chart, Project schedule network diagram, Gantt chart
- 2 resource optimization techniques: Resource leveling, Resource smoothing
- 2 schedule compression techniques: Fast tracking, Crashing

Cost

- 3 elements of activity cost: Direct cost, Indirect cost, Contingency reserve
- 3 estimating techniques: Analogous, Parametric, Bottom-up
- 3 estimate types: ROM (-25% to 75%), Definitive estimate (-5% to 10%), Phased estimate
- Project budget = Cost baseline + Management reserve
- Cost baseline vs. Funding requirement
- Funding limit reconciliation

Quality

- Cost of Quality: Cost of conformance vs. Cost of non-conformance)
- Audit: processes/policies/procedures compliance and improvement
- Verification:



- 5 quality measurement tools: Cause and Effect diagram (Ishikawa diagram, why-why diagram, fishbone diagram), Scatter diagram, Control chart, Pareto chart, Statiscal sampling

Integration

- 2 key components of project management plan: project baseline and subsidiary plans

Procurement

- Source selection criteria
- Bidder conferences
- 3 contract types: Fixed Price (FP), Cost Reimbursable (CR), Time and Material (T&M)
- 4 legal concepts: Waranty, Waiver, Breach of contract, Cease and desist letter
- 2 steps managing disputes: Negotiation, Alternative Dispute Resolution (ADR)

Lesson 3: Doing the work

Risks

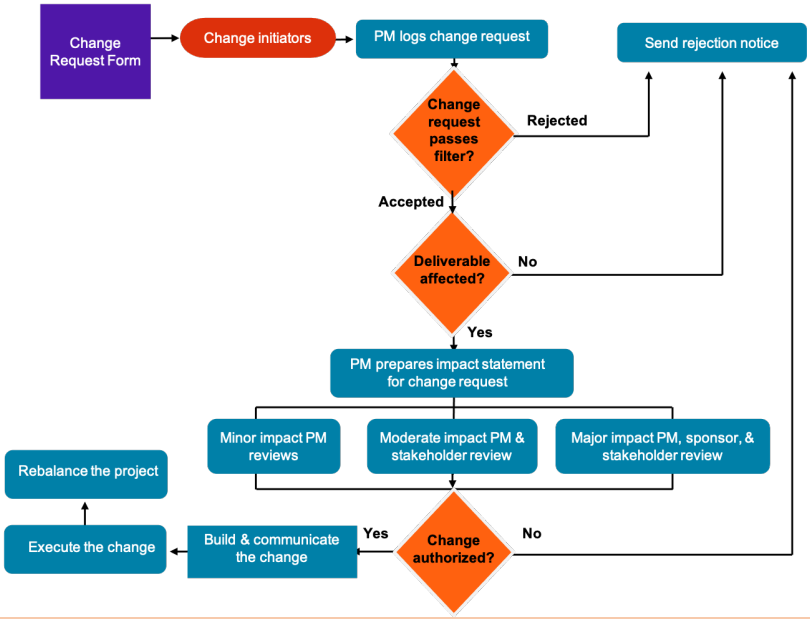
- Risk Breakdown Structure (RBS)
- Positive risks (Opportunities) vs. Negative risks (Threat)
- Probability and Impact matrix, Watch list
- Secondary risk vs. Residual risk
- Contingency plan, Fallback plan
- 5 negative risk response strategies:

- 5 positive risk response strategies:

- A risk happens => implement risk response plan. An issue occurs => workaround

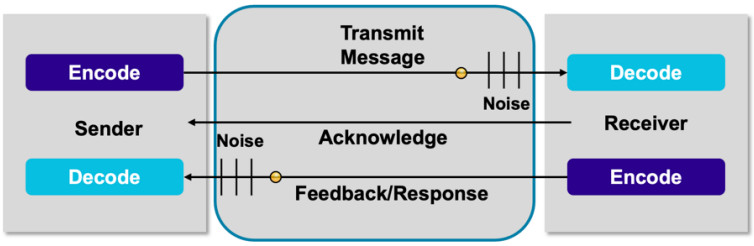
Changes

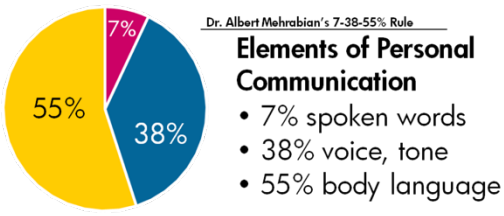
- 4 causes of changes:
  - Inaccurate estimates,
  - Specification changes,
  - New regulations,
  - Missed requirements.
- 4 components of approved changes:
  - corrective action,
  - preventive action,
  - defect repair,
  - document/plan updates.
- Deliverable Change Management Process Flowchart:



Communications

- Communication Management Plan includes stakeholder communications requirements and escalation process.
- 3 communication methods: push, pull and interactive
- 2 sources of noise in communication model: transmission and decoding.





Stakeholders

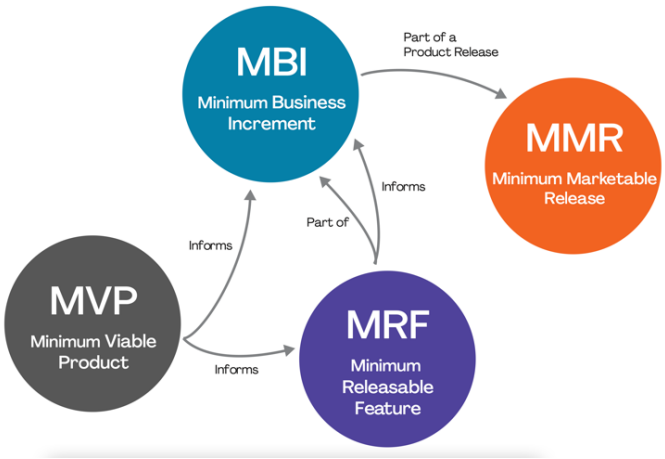
- Stakeholder Register vs. Stakeholder Management Plan
- Stakeholder Engagement Plan includes Stakeholder Engagement Assessment matrix and Stakeholder Engagement approaches.
- 5 engagement levels in Stakeholder Engagement Assessment matrix:

AGILE

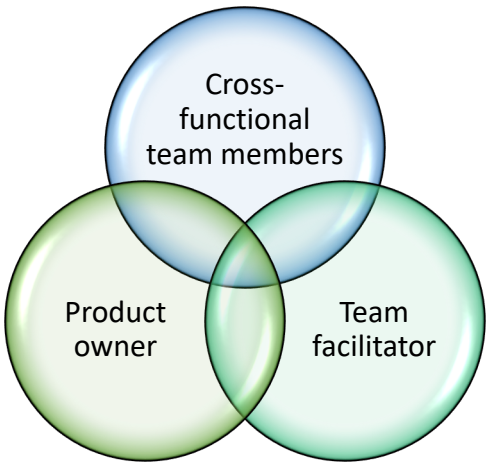
- **4 Agile values**

- **4 characteristics of Agile team**

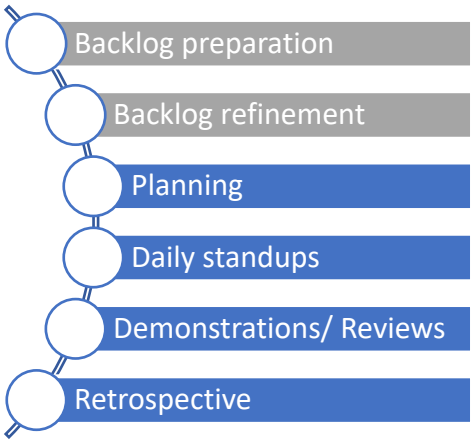
- **Business Value Delivery**

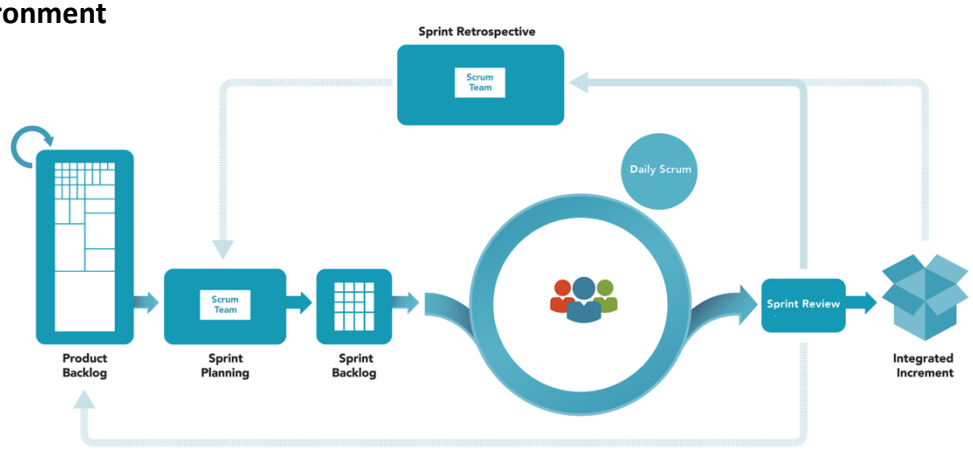


- **3 Agile roles**

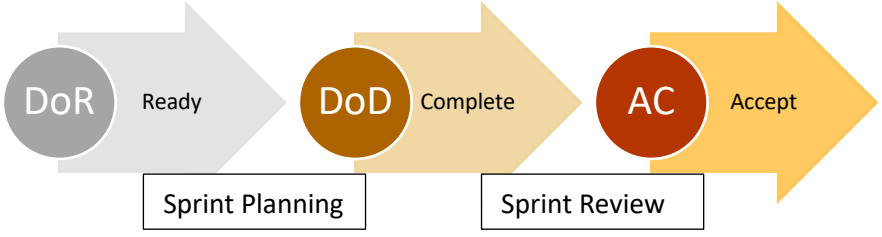


- **6 considerations in Agile environment**

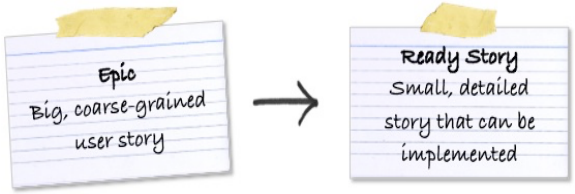




- **DoR, DoD and AC**



- **Epic vs. User stories**



FORMULAS

Name	Acronym	Formula
Three-Point Estimate		**Beta Distribution (PERT): (P + 4*M + O) / 6** Triangular Distribution: (P + O + M) / 3
Total Float/ Slack		**Project duration – Path Duration** (LS - ES = LF - EF)
Risk Score		**Propability * Impact**
Communications Channels		**N * (N-1) / 2**
Planned Value	PV	**% work planned to date * budgeted cost** The authorized budget assigned to scheduled work.
Earned Value	EV	**% work complete to date * budgeted cost** The measure of work performed expressed in terms of the budget authorized for that work.
Actual Cost	AC	The realized cost incurred for the work performed on an activity during a specific time period.
Cost Variance	CV	**EV - AC** CV > 0: under budget. CV < 0: over budget.
Schedule Variance	SV	**EV - PV** SV > 0: ahead schedule. SV < 0: behind schedule.
Cost Performance Index	CPI	**EV / AC** (traditional approach) **completed value / planned value** (Agile approach) CPI > 1: under budget. CPI < 1: over budget.
Schedule Performance Index	SPI	**EV / PV** (traditional approach) **completed stories / planned stories** (Agile approach) SPI > 1: ahead schedule. SPI < 1: behind schedule.
Estimate At Completion	EAC	**BAC / CPI** The current projected final cost of the project.
Estimate to Complete	ETC	**EAC – AC** The amount of money needed to complete the project.
Variance at Complete	VAC	**BAC - EAC**
Expected Monetary Value	EMV	The **monetary value of a possible outcome** * The **probability** it will occur
Net Promoter Score	NPS	**% Promoters – % Detractors**
Discounted cash flow	PV, FV	**PV = FV / ((1 +r) ^ n)**