Section 6 - Other important things to know

Evidence Based Management

### **Why Use Evidence-Based Management?**

* **Purpose:** To continuously improve business outcomes by measuring and improving value delivery, avoiding reliance on intuition or assumptions.
* **Focus:** Prevents the trap of improving processes at the expense of product value and business goals.

### **Definition of EBM (from Scrum.org):**

EBM provides:

1. **Ability to measure value delivered to customers.**
2. **Means to guide improvements based on those measures.**

Simplified: **Measure the value delivered and improve delivery mechanisms.**

### **Four Key Value Areas of EBM**

1. **Current Value (CV):**
   * Measures the value delivered to stakeholders **right now**.
   * Key metrics: Customer satisfaction, employee happiness, stakeholder satisfaction.
2. **Unrealized Value (UV):**
   * Identifies potential value that could be captured in the future.
   * Key questions:
     + Are there untapped opportunities in the current or new markets?
     + Is pursuing these opportunities worth the risk?
3. **Time to Market (T2M):**
   * Tracks how quickly value can be delivered to customers.
   * Key improvement strategies:
     + Reduce bottlenecks.
     + Automate processes.
     + Minimize technical debt.
     + Improve pipeline and delivery efficiency.
4. **Ability to Innovate (A2I):**
   * Assesses the organization's capacity to develop and deliver new solutions.
   * Barriers:
     + Technical debt.
     + Complex legacy systems.
     + Lack of resources or motivation.
   * Solutions:
     + Ensure access to modern tools and training.
     + Provide stable production and development environments.

### **Indicators in EBM**

* **Lagging Indicators:** Provide feedback over longer periods (e.g., monthly surveys for employee satisfaction).
* **Leading Indicators:** Provide rapid feedback (e.g., daily check-in systems for employee mood tracking).

### **Key Practices for EBM:**

1. **Frequent Review:** Continuously inspect and adapt key value measures.
2. **Incremental Improvement:** Use insights to refine both the measures and processes.
3. **Distinguish Correlation vs. Causation:** Understand not just what is happening but why it’s happening.

### **Tips for Exam Preparation:**

* **Memorize the Four Key Value Areas** and their focus areas.
* **Understand leading vs. lagging indicators.**
* **Practice distinguishing between improving processes and improving value delivery.**
* Read the **Scrum.org Evidence-Based Management Guide** for detailed insights.

EBM is about ensuring that agile efforts are aligned with delivering tangible business value, guided by transparent and measurable evidence. Would you like a visual representation of the key areas or assistance with specific scenarios to apply EBM?

Scrum Theory Empiricism

### **Scrum Theory: Empiricism**

* **Empiricism**: Decisions are based on observations of reality rather than assumptions or fictional plans.
* **Iterative and Incremental**: Scrum promotes small, time-boxed cycles (sprints) to optimize predictability and mitigate risks.
* Agile principles prioritize adaptability over fixed plans, aligning with Scrum's iterative nature.

### **Three Pillars of Scrum:**

1. **Transparency**:
   * Open and honest communication, where good and bad news are shared without fear of blame.
   * Fostered by courage, openness, respect, and trust within the team.
   * Tools like **Daily Scrum**, **Sprint Planning**, **Retrospectives**, and visual aids (e.g., JIRA boards) support transparency.
2. **Inspection**:
   * Frequent checks on progress, process, and outcomes (e.g., through sprint reviews and retrospectives).
   * **Definition of Done (DoD)** ensures shared understanding and quality standards.
   * Regular reviews identify variances and ensure alignment with goals.
3. **Adaptation**:
   * Adjustments are made based on inspection outcomes, allowing teams to adapt to changes in requirements or circumstances.
   * Continuous improvement is emphasized in activities like **Daily Scrum**, backlog refinement, and sprint planning.

### **Key Agile Values Highlighted:**

* Responding to change over following a plan.
* Collaboration, trust, and shared accountability.

Cone of Uncertainty

### **Key Points About the Cone of Uncertainty:**

1. **Definition**:
   * A chart illustrating the range of uncertainty around project estimates at different stages of development.
   * Early in a project, uncertainty is high because there's limited knowledge about the product, customer needs, and unforeseen challenges.
   * Over time, as the team builds and learns, uncertainty decreases, and estimates become more accurate.
2. **Axes**:
   * **Y-Axis (Vertical)**: The level of estimation error (e.g., overestimation or underestimation).
   * **X-Axis (Horizontal)**: Time, showing the product's progression through phases like concept, requirements, design, and development.
3. **Progression**:
   * At the **beginning** of a project, uncertainty is highest. Accurate predictions about effort, costs, or time are challenging.
   * As work progresses and increments are delivered, the team gains experience, learns more about the product and its context, and reduces uncertainty.
4. **Practical Implications**:
   * Avoid making firm commitments or detailed estimates too early in the project (left side of the cone), as they are more likely to be inaccurate.
   * Instead, communicate that estimates will improve over time as more is learned (right side of the cone).
   * Use iterative and incremental delivery (as in Scrum) to refine estimates progressively.
5. **Challenges with Stakeholders**:
   * Clients or stakeholders may push for precise budgets or timelines early in the project when uncertainty is high.
   * It's essential to manage expectations and explain that accurate estimates are more reliable later in the cone of uncertainty.
6. **Relevance to Scrum**:
   * Scrum helps address the challenges of the cone of uncertainty by emphasizing **empiricism** (transparency, inspection, adaptation) and incremental delivery.
   * Frequent inspections, like sprint reviews, and adapting the backlog based on new knowledge, reduce uncertainty over time.

### **Exam Tip:**

For certification exams (e.g., PSM I, PSPO I), remember:

* The cone of uncertainty demonstrates **how estimates become more accurate over time**.
* It emphasizes **progressive refinement** of understanding and estimation.

Feature and Component teams

### **Feature Teams**

* **Definition**: Cross-functional teams that have all the necessary skills to deliver a customer-focused product increment.
* **Structure**:
  + Teams work on **features** (functionalities) that directly deliver value to the customer.
  + Team members have diverse skill sets, including UI/UX, backend, database, testing, etc.
* **Advantages**:
  + **Reduced dependencies**: A single team can complete an entire increment without waiting on others.
  + **Customer focus**: Work is aligned with customer needs and business outcomes.
  + **Adaptability**: Easier to pivot based on customer feedback or changing requirements.
  + **Faster delivery**: Teams can deliver end-to-end increments independently.
* **Disadvantages**:
  + **Skill breadth required**: Members need to be proficient in multiple domains.
  + May require **upskilling** if team members lack expertise in certain areas.

### **Component Teams**

* **Definition**: Teams that specialize in a specific component or layer of the product, such as the database, application logic, or UI.
* **Structure**:
  + Focus on a **technical component** rather than an end-to-end feature.
  + Common in traditional **waterfall** methodologies or legacy projects.
* **Advantages**:
  + **Specialization**: Teams can focus on mastering a specific area (e.g., optimizing databases, enhancing a specific API).
  + **Centralization**: Components can be reused across multiple products or teams.
  + **Governance**: Easier to control and manage shared assets like data or libraries.
* **Disadvantages**:
  + **Increased dependencies**: Teams must rely on other component teams to complete a feature.
  + **Slower delivery**: Dependency management can lead to delays.
  + **Coordination challenges**: Greater effort is needed to align work across teams.

### **Key Exam Points**

1. **Feature Teams**:
   * Focus on delivering customer-centric increments.
   * Cross-functional and self-sufficient, minimizing dependencies.
2. **Component Teams**:
   * Focus on specialized components, not the end-to-end delivery.
   * Create dependencies between teams, requiring careful management.

### **Dependency Management for Component Teams**

If you work with component teams:

* Identify dependencies early.
* Make dependencies **visible** in the **product backlog**.
* Use tools like **Jira** to link work items and track dependencies.
* Avoid bringing work items into a sprint backlog if they depend on other teams' deliverables.

### **Agile Preference**

* Agile frameworks like Scrum encourage **feature teams** over component teams to:
  + Reduce complexity.
  + Deliver customer value faster.
  + Support continuous feedback loops.

**The bullet point Items you must remember**

**For easy fast marks in the assessment exams make sure you know and have written down:**

**The 5 Scrum Values**

1. Commitment
2. Courage
3. Focus
4. Openness
5. Respect

**The three pillars of Empiricism**

1. Transparency
2. Inspection
3. Adaption

**The Evidence-Based Management (EBM)** **four key value areas (KVA)**

1. Unrealized Value
2. Current Value
3. Time-to-market
4. Ability-to-innovate

**Sprint Planning has 3 topics:**

1. Topic One: Why is this Sprint valuable?
2. Topic Two: What can be Done this Sprint?
3. Topic Three: How will the chosen work get done?

**The suggested Product Backlog attributes**

* Description
* Order
* Size

You may hear about 3 questions to be asked at Daily Scrums "what did I do yesterday, what will I do today, do I have any blockers" although these are good questions to answer, they are not part of Scrum. So don't get confused. If you are asked "Which Sprint Event requires 3 questions to be considered" the answer is the Sprint Planning Event.