Agile Software Development (TCS 855)

Unit-V

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Distributed Agile: The challenges and opportunities

The Benefits

- Employee retention
- Access to a global pool of talent
- Soft skills development
- Productivity improvement

The challenges

- Communication
- Potential salary cuts
- Technical issues
- Cultural adaptation

Remote And Hybrid Work Challenges

Communication

20% of remote workers consider collaboration and communication as the main struggles - Source: Buffer.

Technical Issues

51% of companies experienced IT pains during transition to remote after the Covid-19 outbreak - Source: Navisite.

Potential Salary Cuts

"We'll adjust salary to your location... There'll be severe ramifications for people who are not honest" - Source: Mark Zuckerberg, CEO @ Facebook.

Cultural Adaptation

"It's not a technological problem. What we don't have yet (in many cases) is the new mindset" - Source: Adrian Zicari, Management expert.

RISK MITIGATION

- Agile is about Risk Mitigation.

- Process frameworks like Waterfall introduce and maintain a high level of risk over the lifecycle of a project.

- Agile principles work to deliver value . That's accomplished through continuous delivery as requirements are discovered.by reducing risk.

- Agile exposes and provides the opportunity to recognize and mitigate risk early.

- Risk mitigation is achieved through: cross-functional teams, sustainable and predictable delivery pace, continuous feedback, and good engineering practices.

- Transparency at all levels of an enterprise is also key. Agile tries to answer questions to determine risk in the following areas:
- **Business :** Do we know the scope? Is there a market? Can we deliver it for an appropriate cost?
- **Technical:** Is it a new technology? Does our Architecture support it? Does our team have the skills
- **Feedback (verification & validation):** Can we get effective feedback to highlight when we should address the risks?
- **Organizational:** Do we have what we need (people, equipment, other) to deliver the product?
- **Dependency:** What outside events need to take place to deliver the project? Do I have a plan to manage dependencies?
- Agile is about delivering value. Agile is about all sorts of cool engineering techniques.

Agile Cloud

- Agile Cloud is an outrageously simple database for people who understand their business needs. It's a seriously powerful information management tool for IT that provides Control with Agility.

Agile

- Agile is a development methodology.

- The idea behind Agile is that you interactively prototype your ideas until you and your users are happy.

- When you are ready, it goes into production. Over time, you continue to make small changes to your information system.

- Agile is well suited to information systems controlled by domain experts.

- Agile + Cloud
- Agile Cloud is an information platform for designing complex information system requirements very quickly while maintaining a high quality information model.
- It is industry agnostic and can be used in any known industry or business application.
- The better the information design, the less work is required to implement the application. Agile Cloud takes this idea to it's ultimate logical conclusion.
- The Agile Cloud information design is as near to perfect as can be. This results in a dramatic reduction in the amount of code required to design an information application, almost down to the point of zero coding.
- Many Agile Cloud implementation are complete code free meaning no human code was written.

Agile Cloud is two things.

- First, it is a design tool for creating high quality information systems, very fast. Our primary reason for being is to ensure that your information system has data integrity, is accurate and reliable.
- Secondly, it is an information system for data entry and reporting. For the large Enterprise, it is designed to compliment your ERP systems. ERP systems are great, they are generally well controlled and have excellent structure, but they are not flexible. Agile Cloud provides the control of an ERP system with flexibility, the ability to change.

A Tailorable Method for Balancing Agile and Plan-Driven Methods

Step 1	Rate the project's environmental, agile, and plan-driven risks. If uncertain about ratings, buy information via prototyping, data collection, and analysis.
Step 2a	If agility risks dominate plan-driven risks, go risk-based plan-driven.
Step 2b	If plan-driven risks dominate agility risks, go risk-based agile.
Step 3	If parts of the application satisfy 2a and others 2b, architect the application to encapsulate the agile parts. Go risk-based agile in the agile parts and risk-based plan-driven elsewhere.
Step 4	Establish an overall project strategy by integrating individual risk mitigation plans.
Step 5	Monitor progress and risks/opportunities, re-adjust balance and process as appropriate.

Summery of risk base method
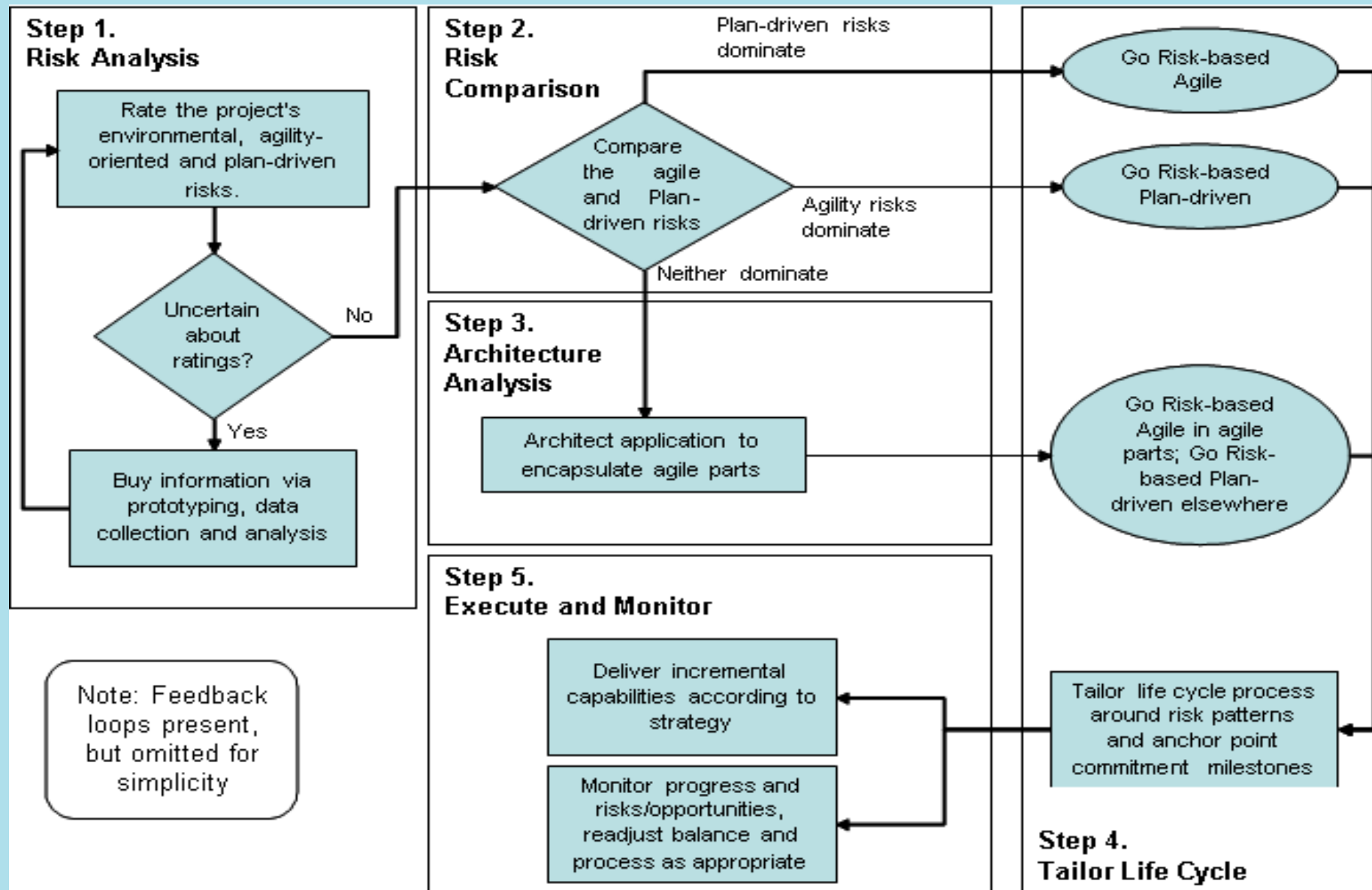
Categories of Risk

- **Environmental**
  - **Risks that result from the project's general environment**
- Agile
  - Risks that are specific to the use of agile methods
- Plan-Driven
  - Risks that are specific to the use of plan-driven methods

Candidate Risk Environment

Environmental risk: risks that result from the project's general environment

- **E-Tech.** Technology uncertainties
- **E-Coord.** **Many diverse stakeholders to coordinate**
- **E-Cmplx.** Complex system of systems

Candidate Risks for Agile

Agile risks: risks that are specific to the use of the agile methods

- **A-Scale.**   Scalability and criticality
- **A-YAGNI.**   Use of simple design or YAGNI
- **A-Churn.**   Personnel turnover or churn
- **A-Skill.**   **Not enough people skilled in agile methods**

Candidate Risks for Plan-Driven

Plan-driven risks: risks that are specific to the use of plan-driven methods

- **P-Change.** Rapid change
- **P-Speed.** Need for rapid results
- **P-Emerge.** Emergent requirements
- **P-Skill.** **Not enough people skilled in plan-driven methods**