

System Development Methods

CT00046-3-2

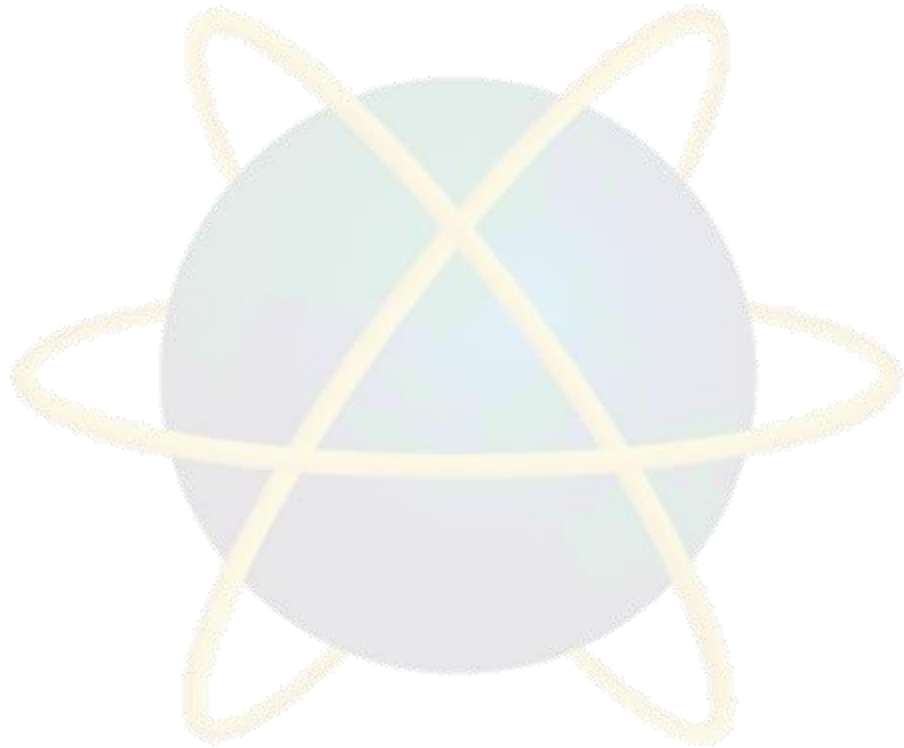


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Comparing Methodologies

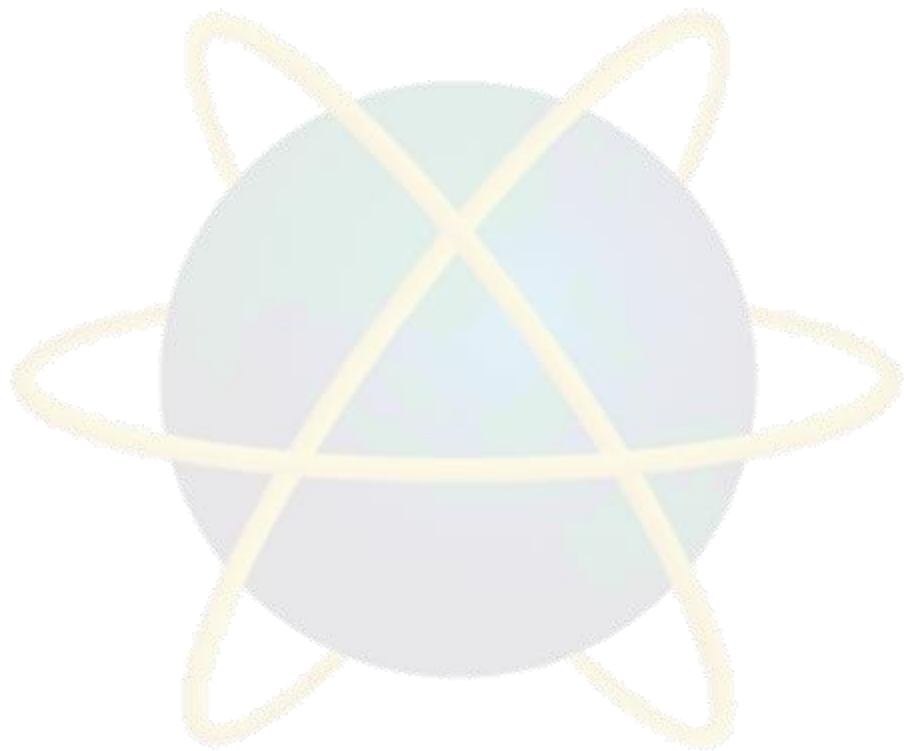
Topic & Structure of the Lesson

- Comparing Methodologies
- Frameworks
- Blending Methodologies



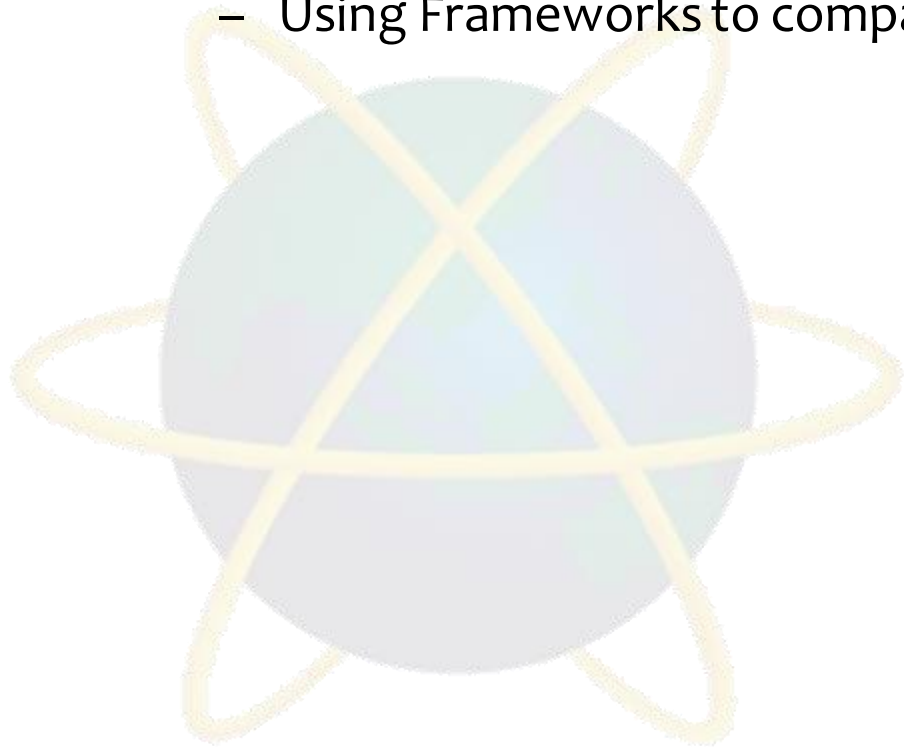


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Learning Outcome

- At the end of the module, you should able to:
 - The criteria needed to compare methodologies
 - Comparing Methodologies
 - Using Frameworks to compare Methodologies

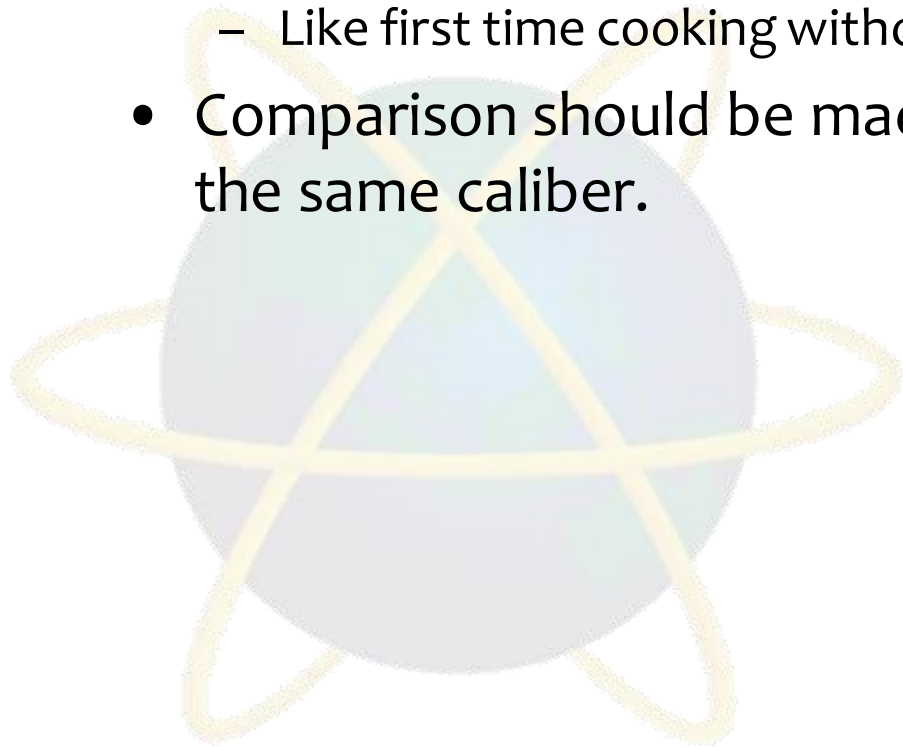


Key Terms you must be able to use

- If you have mastered this topic, you should be able to use the following terms correctly in your assignments and exams:
 - Comparing Methodologies
 - Frameworks
 - Blending Methodologies

Comparisons of Methodologies

- Comparison made to select ONE (or more) suitable methodology for a project.
- Wrong selection (or no Methodology) would be disastrous
 - Like first time cooking without a recipe.
- Comparison should be made between methodologies of the same caliber.



Choosing the right Methodology depends on

- The type of problems and suggested solution
 - Direct solution, hypothesis, anomalies, etc.
- The type of project
 - exclusive, corporate, partnership, outsourced, etc.
 - Speed of the project.
- The type of products
 - Mobile, web, stand-alone, enterprise / corporate, etc.
 - The expected output (conceptual, working product, etc)
- Requirements are fixed or can be often changing.
- Size and budget of project

Choosing the right Methodology depends on (cont)

- Knowledge of developer
 - Developer trained specifically under one methodology. Have enough resources for most of the process.
 - Developers can be easily trained on the methodology.
 - Vendor/partner familiar with the methodology you use.
 - Tools that have recommended by the methodology
- Support for a particular methodology is easily obtained
 - By supporting bodies.
 - Experts are available.
- Availability of users throughout the project.

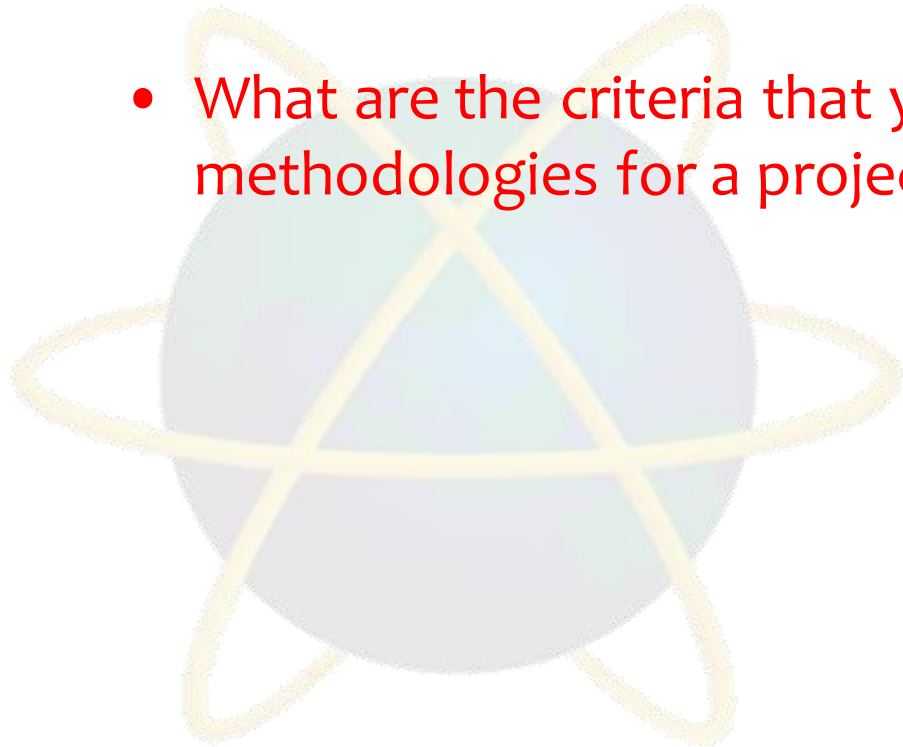
Comparing Methodologies

Example

Facts	Waterfall	RAD	SSM
Types of Projects	Direct Solution	Direct Solution	Hypothesis	
Size of Project	Large	Small to Medium	Medium to Large	
Type of Product	Any	Applications	Enterprise	
Support / Consultation Available	No	Yes (From Authors)	Yes (From.....)	

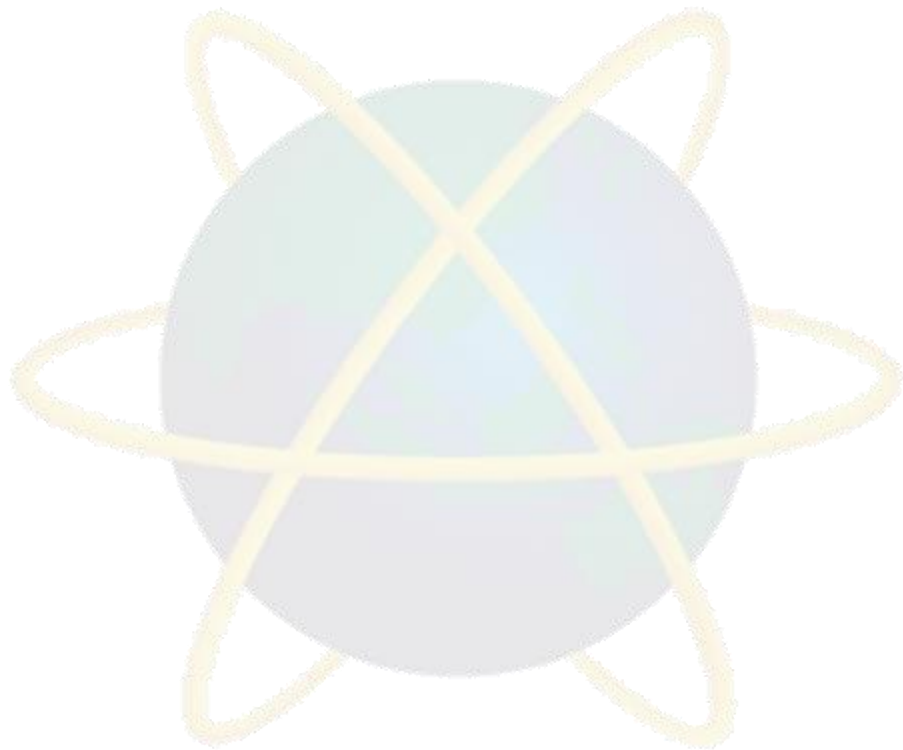
Quick Quiz

- What are the criteria that you would use to compare methodologies for a project?



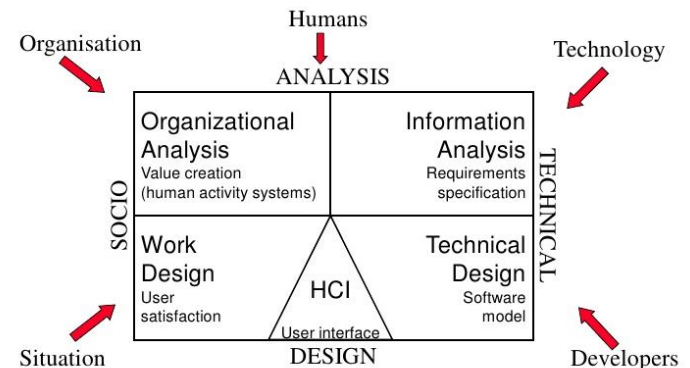
Other options for choosing a suitable Methodology

- Use Framework
- Blend Methodologies



Framework

- Frameworks are a systematic way of applying methodologies
- It allows developers to see the system from different 'point of view'
- It shows the most efficient solutions for problems.
- Example; MULTIVIEW, NIMSAD, Oracle ADF etc.





Blending Methodologies

TRADITIONAL	BLENDED AGILE	"PURE" AGILE
Deterministic	PROJECT MANAGEMENT	Evolutionary
<ul style="list-style-type: none">❑ Detailed plan for entire project❑ Scope-boxed phases❑ Track progress by tasks and milestones completed❑ Detailed documentation for all requirements	<ul style="list-style-type: none">❑ Short to medium length time-boxed iterations❑ Varying granularity plans❑ Track progress by value delivered❑ Risk-driven requirements documentation	<ul style="list-style-type: none">❑ 1-2 week time boxed iterations❑ Plan only current iteration❑ Track progress by working code❑ Tests are only long-term requirements documentation
Up-Front	DESIGN & DEVELOPMENT	Just-In-Time
<ul style="list-style-type: none">❑ Design all before coding in complete detail❑ Periodic builds❑ Integrate only once all code complete❑ Partial unit test coverage	<ul style="list-style-type: none">❑ Risk and value-driven design choices❑ Spike solutions for riskiest components❑ Daily builds❑ Continuous functional testing, largely automated❑ 80% unit test coverage	<ul style="list-style-type: none">❑ Design all just-in-time – nothing up front❑ Minimal design documentation❑ Continuous integration builds❑ Test-driven development; 100% unit test coverage
Low	COLLABORATION	High
<ul style="list-style-type: none">❑ Business involvement only at project start and completion❑ "Throw it over the wall" requirements communication model❑ Communication via periodic state meetings (monthly or greater)	<ul style="list-style-type: none">❑ Frequent, regular business involvement❑ Cross-group collaboration via frequent checkpoints❑ Cross-functional teams❑ Daily "standup" meetings	<ul style="list-style-type: none">❑ Continuous face-to-face business involvement❑ Cross-functional teams❑ Pairing❑ Daily "standup" meetings



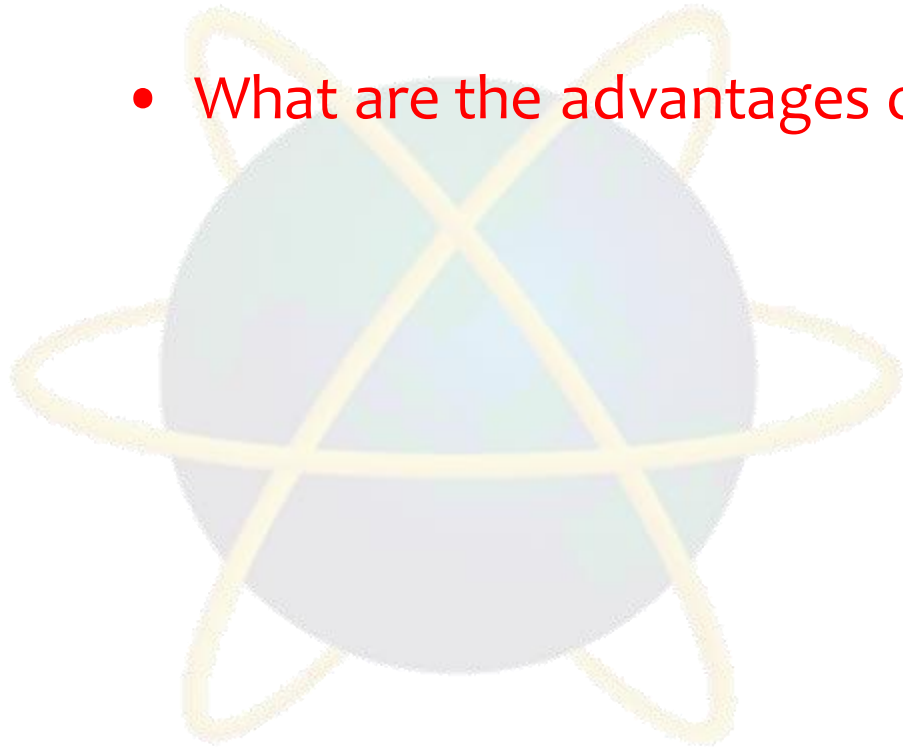
Blending Methodologies

- Sometimes one methodology is not sufficient for a particular project.
 - Project might be blended as well
 - Vendors are involved / part of the project has been outsourced
- Blending methodology is a process of blending TWO (or more) methodologies for a project.
 - **Vertical Blending** – Blending all part of 'A' with all part 'B'
 - **Horizontal Blending** – blending some part of 'A' with other part of 'B'.



Quick Quiz

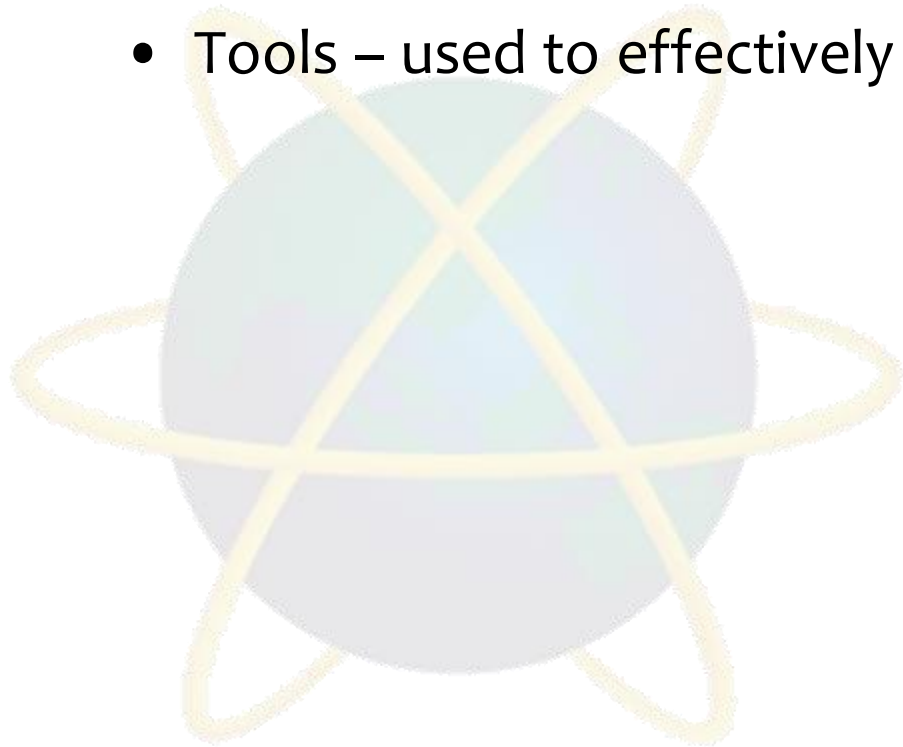
- What are the advantages of blending Methodologies?



Conclusions on Methodologies

All Methodologies have;

- Stages – steps on what to do
- Techniques – Different ways (styles) of doing a task
- Tools – used to effectively and efficiently carry-out a task.





Question & Answer

Next Session

- System Development Planning



Tutorial

Scenario;

You are given a task to build a 'Classroom Scheduling System' for APU's new campus. The system should be linked to the current Webspaces-2.

Question;

- You want to choose a suitable methodology for the particular project. Explain the criteria that you would consider for choosing it.