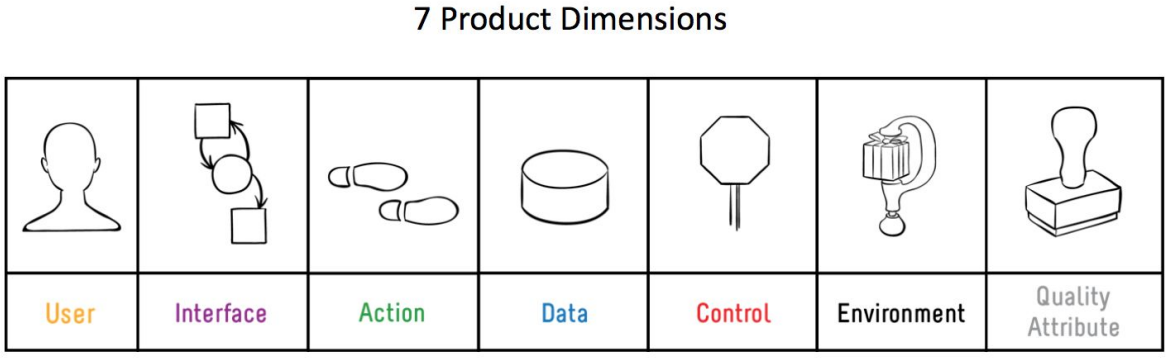
FURPS model

F	Functionality	Capability (Size & Generality of Feature Set), Reusability (Compatibility, Interoperability, Portability), Security (Safety & Exploitability)
U	Usability	Human Factors, Aesthetics, Consistency, Documentation, Responsiveness
R	Reliability	Availability (Failure Frequency (Robustness/Durability/Resilience), Failure Extent & Time-Length (Recoverability/Survivability)), Predictability (Stability), Accuracy (Frequency/Severity of Error)
P	Performance	Speed, Efficiency, Resource Consumption (power, ram, cache, etc.), Throughput, Capacity, Scalability
S	Supportability	(Serviceability, Maintainability, Sustainability, Repair Speed) - Testability, Flexibility (Modifiability, Configurability, Adaptability, Extensibility, Modularity), Installability, Localizability

Source: https://en.wikipedia.org/wiki/Serviceability_(computer)

7 Product Dimensions

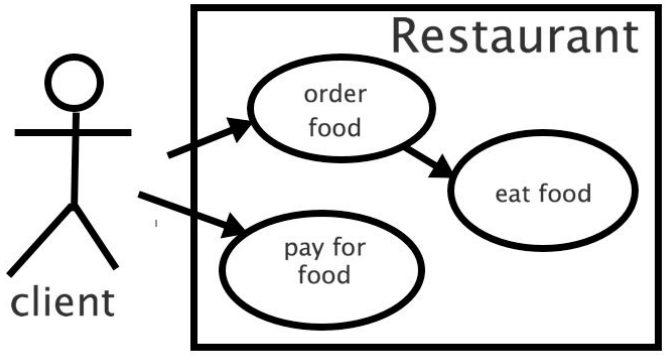


Source: *Discover To Deliver*, Gottesdiener & Gorman, 2012

Use Cases

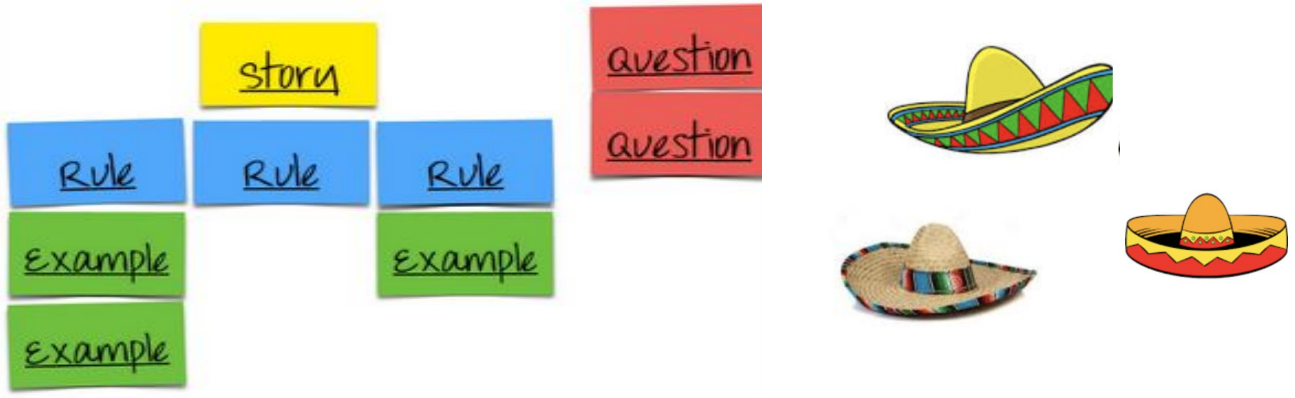
Use case analysis is an important and valuable requirement analysis technique that has been widely used in modern software engineering since its formal introduction by Ivar Jacobson in 1992.

Use Case consist of use case diagram(UML) and specification(text).



1. Use Case Name & ID	7. Post-Condition(s)
2. Actor(s)	8. Basic Path
3. Summary Description	9. Alternative Paths
4. Priority	10. Business Rules
5. Status	11. Non-Functional Requirements
6. Pre-Condition	12. GUI Mockup

Example Mapping



"Three amigos" – tester, dev, PO (may be 1 or 2 more)

- Discuss business rules – blue cards
- For each business rule, write at least one example of desired/undesired behavior – green cards
- Record questions

Agile requirements characteristics - INVEST

I	**Independent**	Self-contained, so no inherent dependency on another user story
N	**Negotiable**	Can be changed and rewritten until they are accepted into an iteration
V	**Valuable**	Relevant and necessary; linked to a business goal
E	**Estimable**	Must be able to size (or estimate) the story
S	**Small**	Small enough to have a certain level of certainty
T	**Testable**	Must be able to test it

Kano model

- **Must-be Quality (basic needs)**

Requirements that the customers expect to get and taken for granted. When done well, customers are just neutral, but when done poorly, customers are very dissatisfied. Kano originally called these "Must-be's" because they are the requirements that must be included and are the price of entry into a market.

- **One-dimensional Quality (performance needs)**

These are the requirements the customers are able to articulate and are at the top of their minds when making choices and evaluating options. the better they are performed, the more satisfaction they bring, conversely, the worse they are performed, the more dissatisfaction they bring.

- **Attractive Quality (delighters)**

These attributes provide satisfaction when achieved fully, but do not cause dissatisfaction when not fulfilled. Requirements that are unexpected pleasant surprises or delights. These are the innovations you bring into your offering. Some companies call them USP's (Unique Selling Propositions).

https://en.wikipedia.org/wiki/Kano_model

Quality criteria of requirements

1. **Accepted (or agreed)**
   All stakeholder recognize the requirement to be correct and relevant
2. **Unambiguous**
   All readers obtain the same understanding, only one interpretation
3. **Necessary**
4. **Consistent**
   No contradictions
5. **Verifiable**
   Can be tested to be fulfilled or not fulfilled with reasonable effort
6. **Feasible**
   Can be implemented and deployed under the existing conditions (time and budget, organization, technical environment, …)
7. **Traceable**
   The requirement and its origins have a unique identification. The origin of the requirement and its relation to other requirements is clear
8. **Complete**
   Handles all relevant issues
9. **Understandable (or clear)**
   For all stakeholder! Depending on the project stage, different stakeholders might be involved. A glossary of terms.

Source: IREB.org