

Agile Methodology

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Speaker

Agenda

- Begins
- Needs
- Agile Manifesto
- Features

After defining and viewing the different software development methods. Now, it is time to introduce and detail the agile methodology.

Agile Methodology Begins

Agile is a software methodology based on the production models of Toyota and Canyon. For this reason, this section is devoted to explain the Toyota production model.

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Lean Manufacturing uses the minimum necessary resources, removing all wastes and maximising the product value.

— Toyota

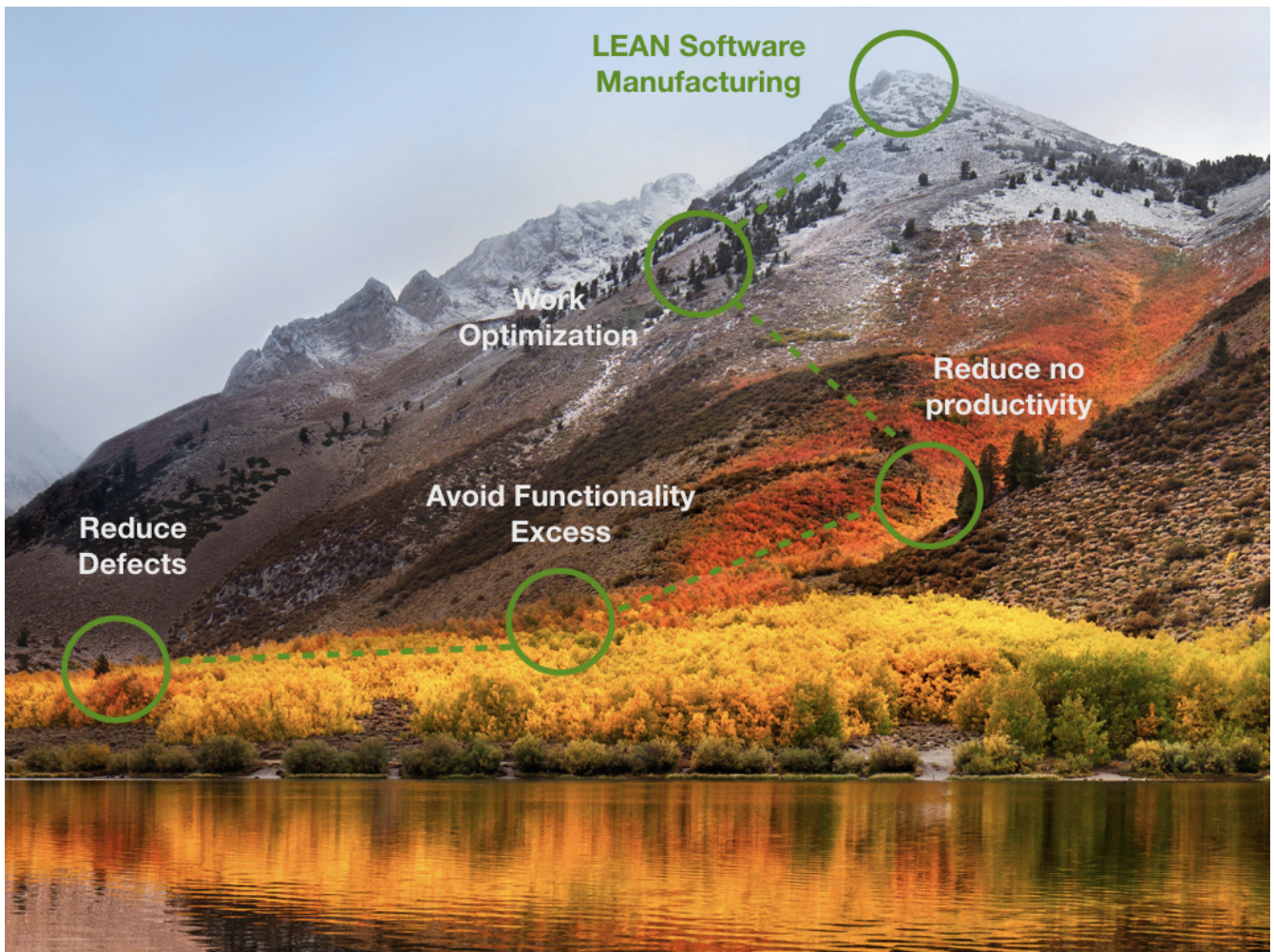
Lean manufacturing is about using the necessary resources to build a product. For that, we need to avoid wasting times, reduce the inventories, improve efficiency and continuous improvement to increase product quality.

LMP Principles



In the following video, it is showed the principal components of Lean Manufacturing.

!Functional



The concept of lean manufacturing could be applied to software development. In this case, the main principles could directly extrapolated: - Reduce code defects (Bugs) - Adjust the functionalities of the product. - Reduce no productive tasks (documentation) - Optimise the work and the time to work.

Agile Methodology Needs

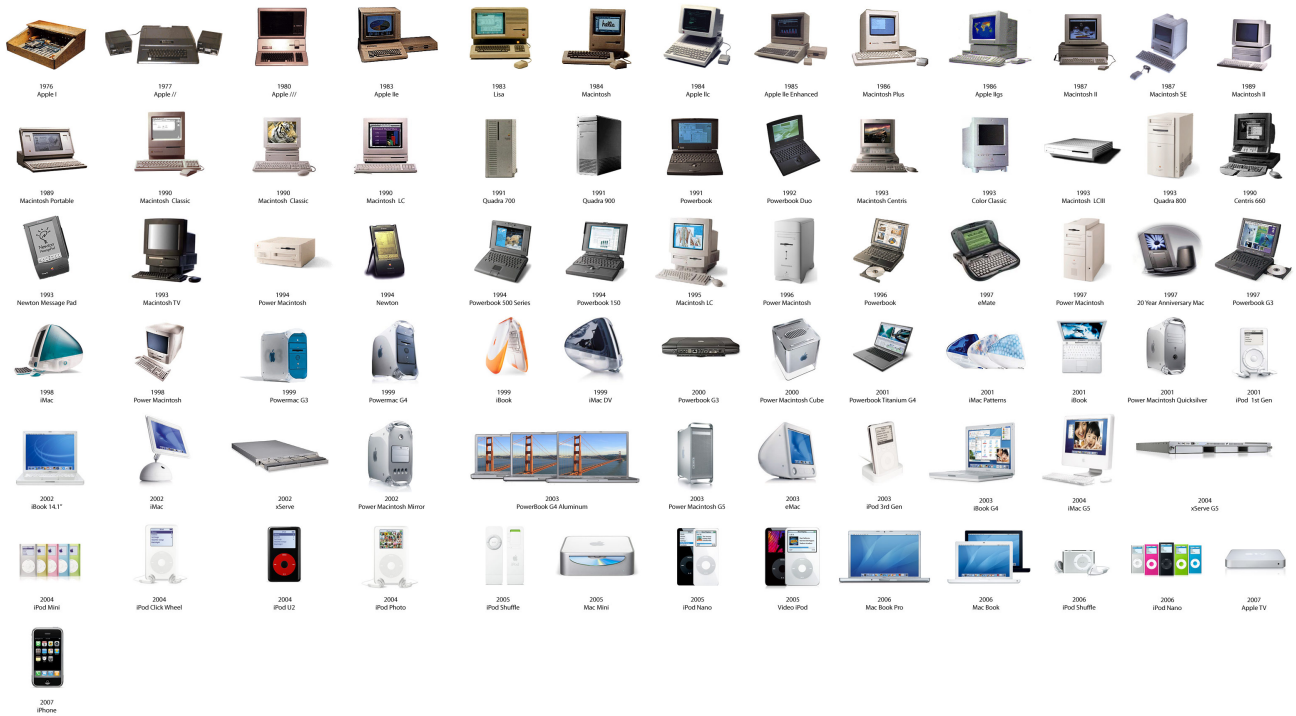
This software principles are the base for the Agile Methodology. But, how the agile methodology born?

!Functional



Apple Form Factor Evolution 1976 through 2007

This is a visual representation of most all the products Apple has launched. This image documents the ever changing form factor and industrial design of Apple's products, not every single model number or slight change made to a previous model. -- Enjoy

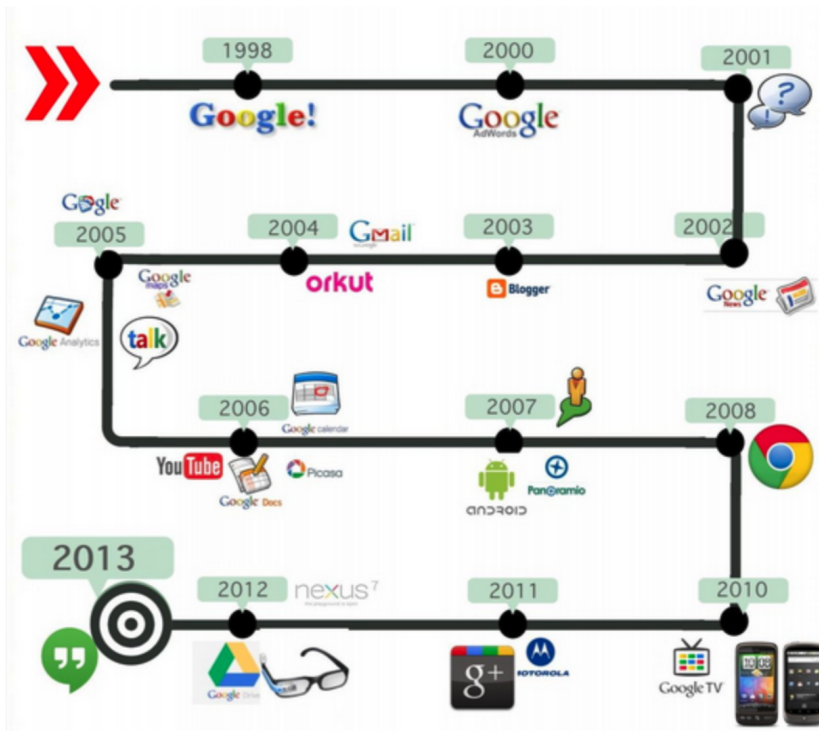


Misc. Apple Accessories



The first problem to deal with is referring the velocity to create newer products. This implies the companies to make the production and development of new products in shorter periods of time.

!Functional



Another important aspect is the uncertainty of the market. The companies has been forced to create a variety of products to cover as much markets as possible. Today, the companies needs to life from a variety of products to survive.

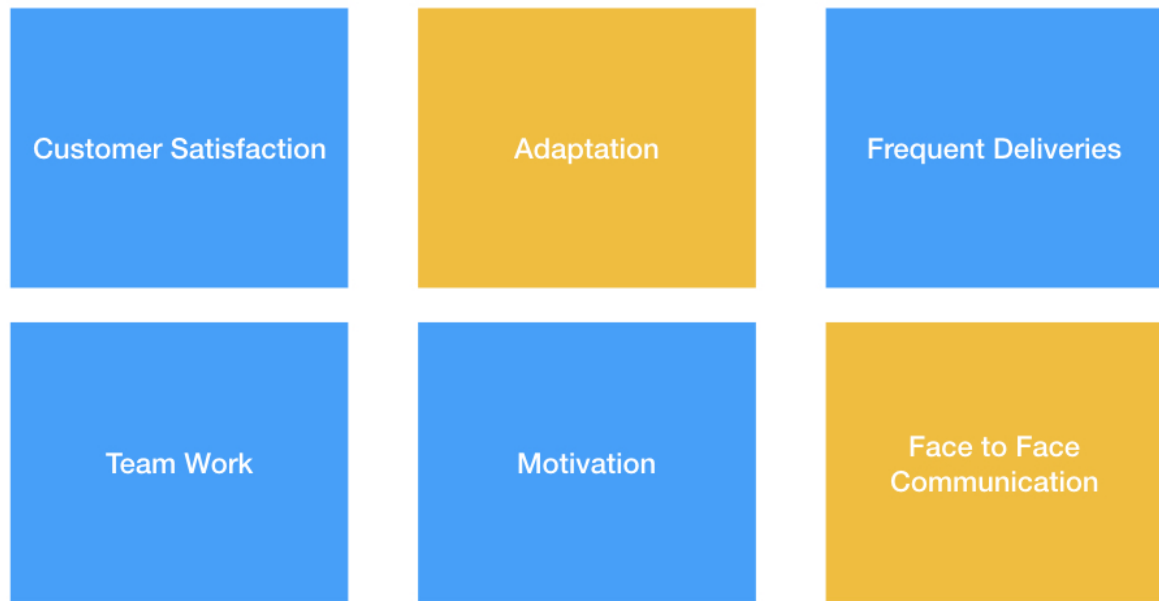
Agile Manifesto

Agile Manifesto - 4 Values

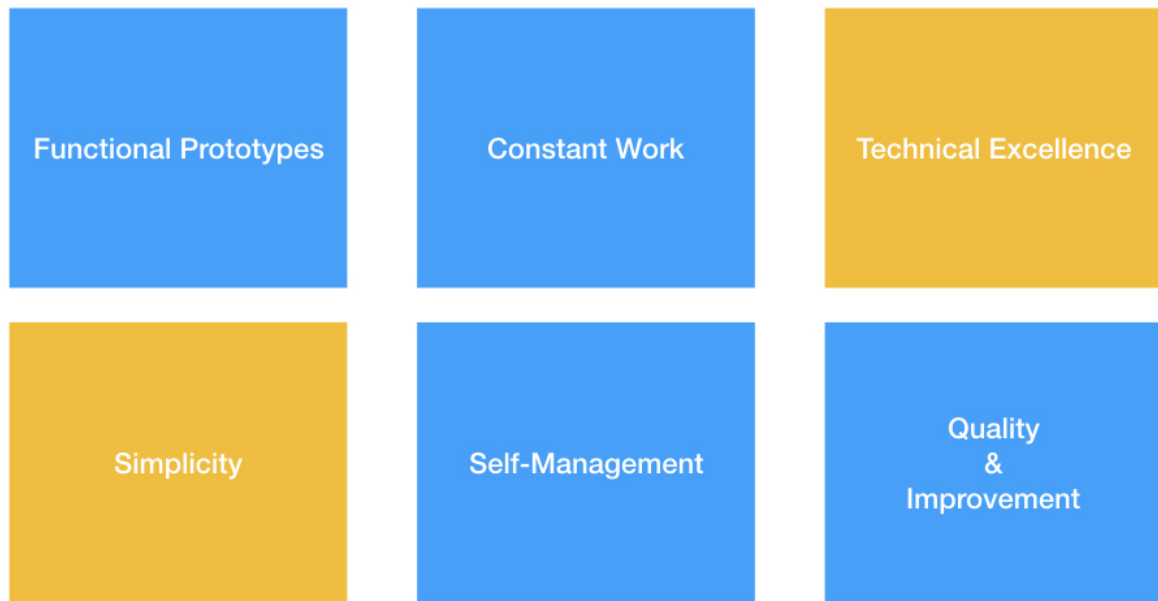
Person & Interaction	Process & Tools
Functional Prototypes	Exhaustive Documentation
Customer Involvement	Contractual Negotiation
Response Change	The Plan

The agile manifesto establishes the main rules of the agile methodology. The first important aspects refer to the 4 values: - **People Interaction**. Agile strength is in the team interaction and customer interaction in order to build the product. It is important bidirectional communication with the client. At the same time, the interaction between the development team is important to advance in the product development. - **Functional Prototypes**. Important aspect of agile is to have always a functional software to show to the client. Over this initial software new functionalities/requirements appear and then, new aspects to improve the product should be developed. - **Customer Involvement**. The development is focused on the user (client). Based on them, the product is constructed and for this reason, it is important a close relation with the customer. - **Response Change**. Refers to the ability to add/remove requirements and functionalities without impacting in the product costs.

Agile Manifesto - 12 Principles



Agile Manifesto - 12 Principles



Agile Features

People



Quality



Customer-based

[Customer] | *customer.gif*

Simplicity

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Data Analytics

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Let's go with SCRUM & Extreme Programming

