41951- ANÁLISE DE SISTEMAS

Transformação digital e o SDLC

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v2023/03/21

universidade de aveiro
departamento de eletrónica, telecomunicações e informática
deti

Objetivos de aprendizagem

Descrever exemplos da transformação digital dos negócios

Identificar três eixos principais na transformação digital

Relacionar o contexto das organizações com as exigências no processo de desenvolvimento

PRR (pós-pandemia)

Prioridades:

- Pacto Ecológico europeu
- Transformação Digital
- Resiliência/infraestruturas

"[...] outra mudança faz de mor espanto: que não se muda já como soía."

"A inovação tecnológica permite - de facto, exige - que as empresas aumentem a sua agilidade e, consequentemente, a sua competitividade. É por isso que as principais prioridades dos CEOs devem ser a digitalização dos componentes essenciais do seu negócio e repensar a concepção organizacional e os processos de gestão. Apanhar esta rápida - e em crescimento rápido - "onda digital" é a única forma de evitar ficar para trás".

PROJECT SYNDICATE
THE WORLD'S OPINION PAGE

PRINT

DOMINIC BARTON

Dominic Barton is the global managing director of McKinsey & Company.

JAN 15, 2016

Catching the Digital Wave

NEW YORK – Technological change has always posed a challenge for companies. But, as we saw once again in 2015, it has never occurred as rapidly, or on as large a scale, as today. As innovation sweeps across virtually every sector, from heavy industry to services, it is transforming the competitive landscape, with the most advanced companies – rather than the largest or most established players – coming out on top.

For incumbents, the threat of displacement is very real. The average tenure of a company on the S&P 500 has fallen from 90 years in 1935 to less than 18 years today. Disruptive new players like Uber, which has upended the taxi industry, are tough competitors, often staking out market share by shifting more surplus to consumers. This is part of a broader trend of intensifying competition that, according to recent research from the McKinsey Global Institute, could reduce the global after-tax profit pool from almost 10% of global GDP today to its 1980 level of about 7.9% within a decade.

http://prosyn.org/lxXI60W

THE WALL STREET JOURNAL.

http://www.wsj.com/articles/SB10001424053111903480904576512250915629460

ESSAY

Why Software Is Eating The World

By **MARC ANDREESSEN**

August 20, 2011

This week, Hewlett-Packard (where I am on the board) announced that it is exploring jettisoning its struggling PC business in favor of investing more heavily in software, where it sees better potential for growth. Meanwhile, Google plans to buy up the cellphone handset maker Motorola Mobility. Both moves surprised the tech world. But both moves are also in line with a trend I've observed, one that makes me optimistic about the future growth of the American and world economies, despite the recent turmoil in the stock market.

In short, software is eating the world.

Marc Andreessen penned his famous "Why Software Is Eating the World" essay in The Wall Street Journal five years ago. Today, the idea that "every company needs to become a software company" is considered almost a cliché. No matter your industry, you're expected to be reimagining your business to make sure you're not the next local taxi company or hotel chain caught completely off guard by your equivalent of Uber or Airbnb. But while the inclination to not be "disrupted" by startups or competitors is useful, it's also not exactly practical.

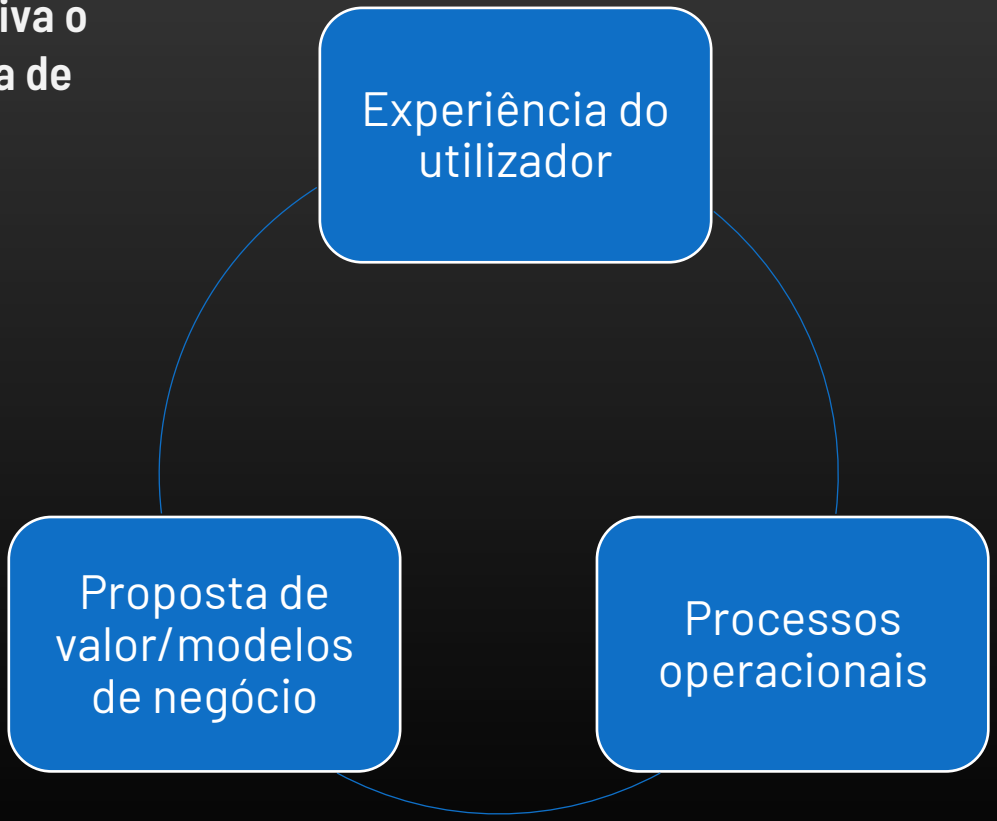
Jeetu Patel
Contributor

Jeetu Patel is the chief strategy officer and head of Box Platform.

https://techcrunch.com/2016/06/07/software-is-eating-the-world-5-years-late

Transformação digital

A utilização de TIC para melhorar de forma decisiva o desempenho ou proposta de valor de uma empresa

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INOVAR NA CAIXA. COM CERTEZA.
iOS


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SGQ

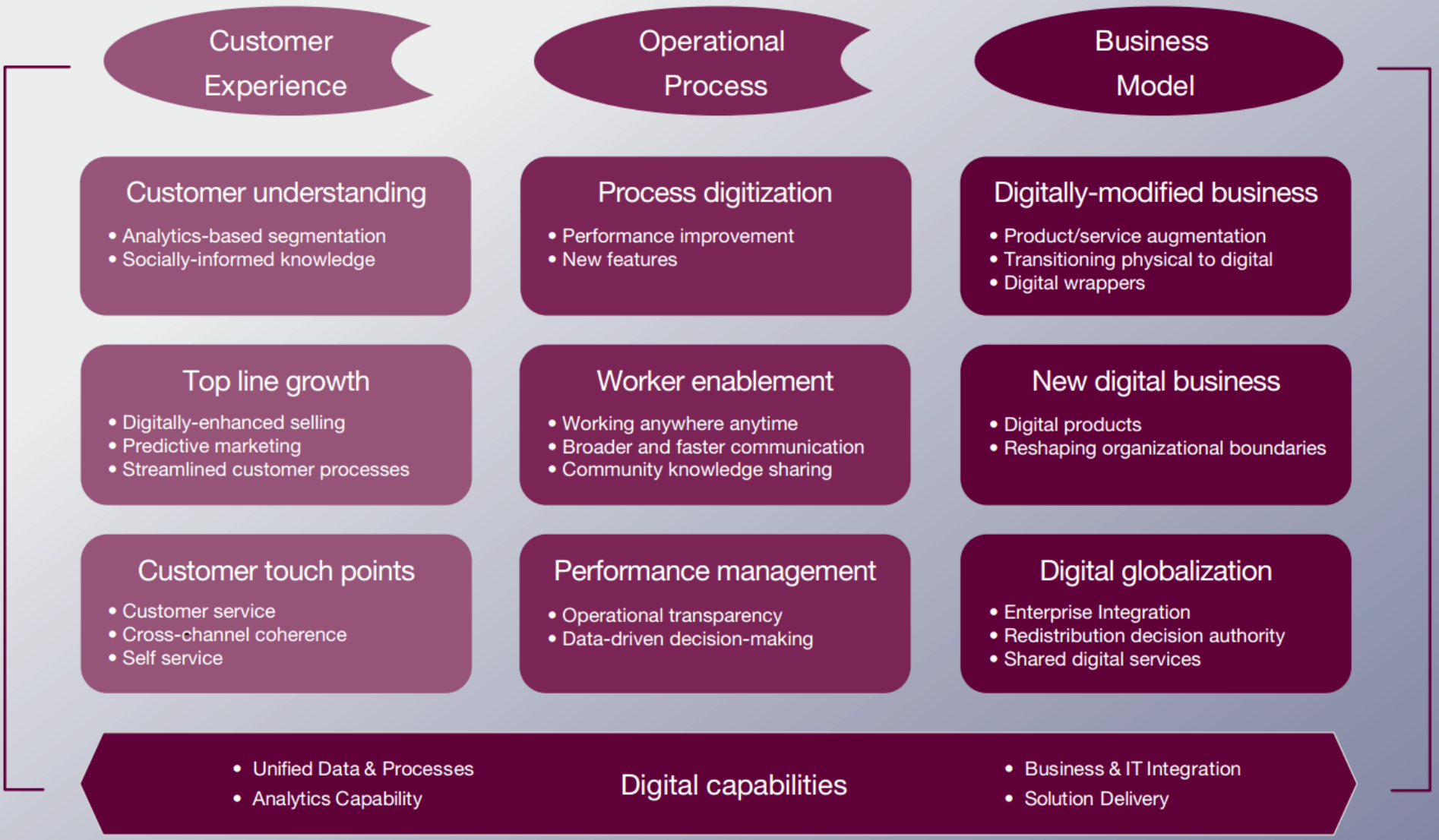
A partir de 26 de Janeiro, a Universidade de Aveiro (UA) implementa o Subsistema para a Garantia da Qualidade das Unidades Curriculares relativo ao 1º semestre do ano letivo 2014/2015.

A partir dessa data e até ao dia 22 de fevereiro, a UA promoverá o lançamento dos inquéritos pedagógicos junto dos estudantes. Os inquéritos são preenchidos eletronicamente, via PACO (http://paco.ua.pt/) ou diretamente em http://sgq.ua.pt.

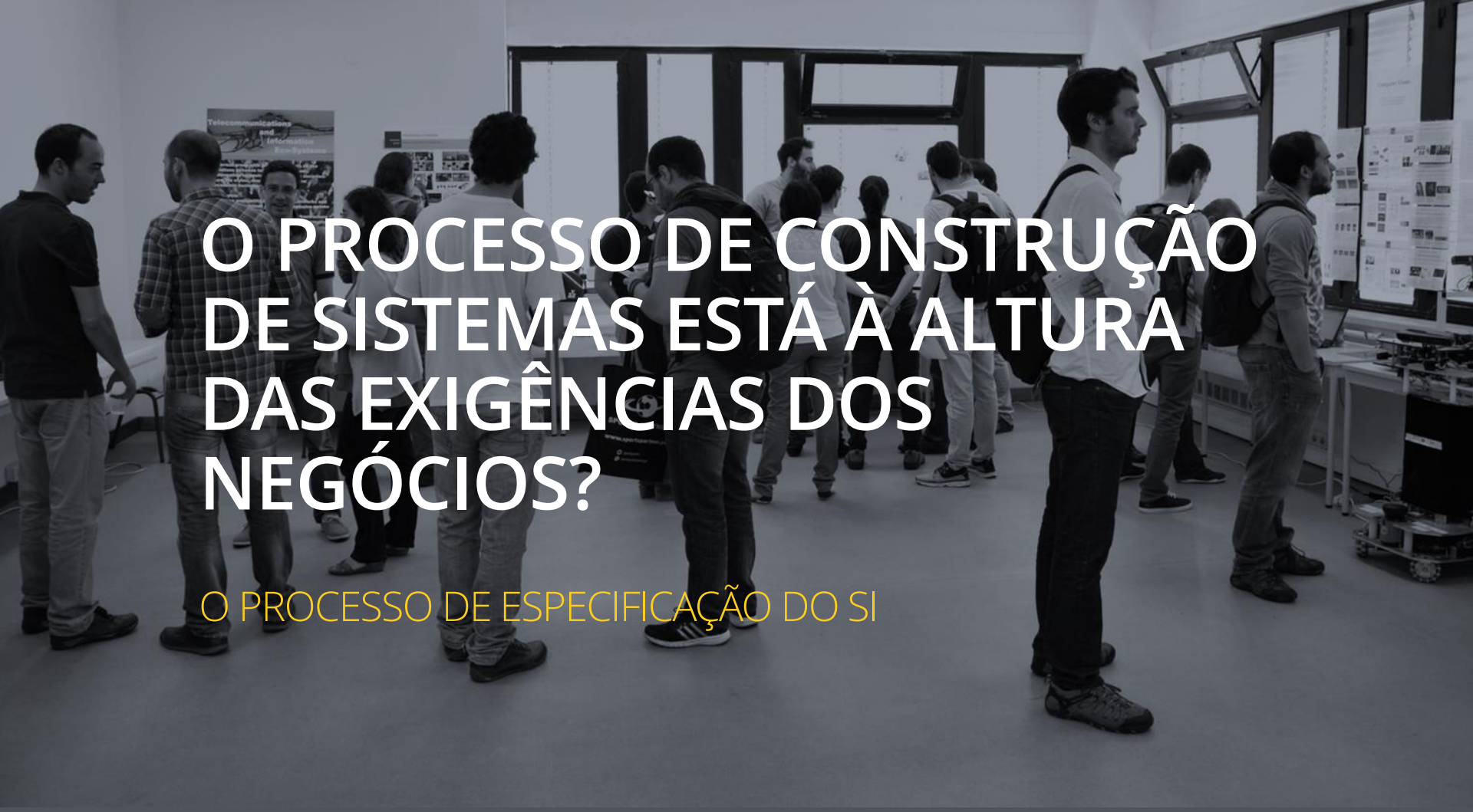
Participa! A tua opinião é fundamental!


UBER

Figure 3: Building blocks of the digital transformation



"Digital Transformation: A Roadmap for Billion-Dollar Organizations", MIT Center for Digital Business



O PROCESSO DE CONSTRUÇÃO DE SISTEMAS ESTÁ À ALTURA DAS EXIGÊNCIAS DOS NEGÓCIOS?

O PROCESSO DE ESPECIFICAÇÃO DO SI

universidade de aveiro
departamento de eletrónica, telecomunicações e informática
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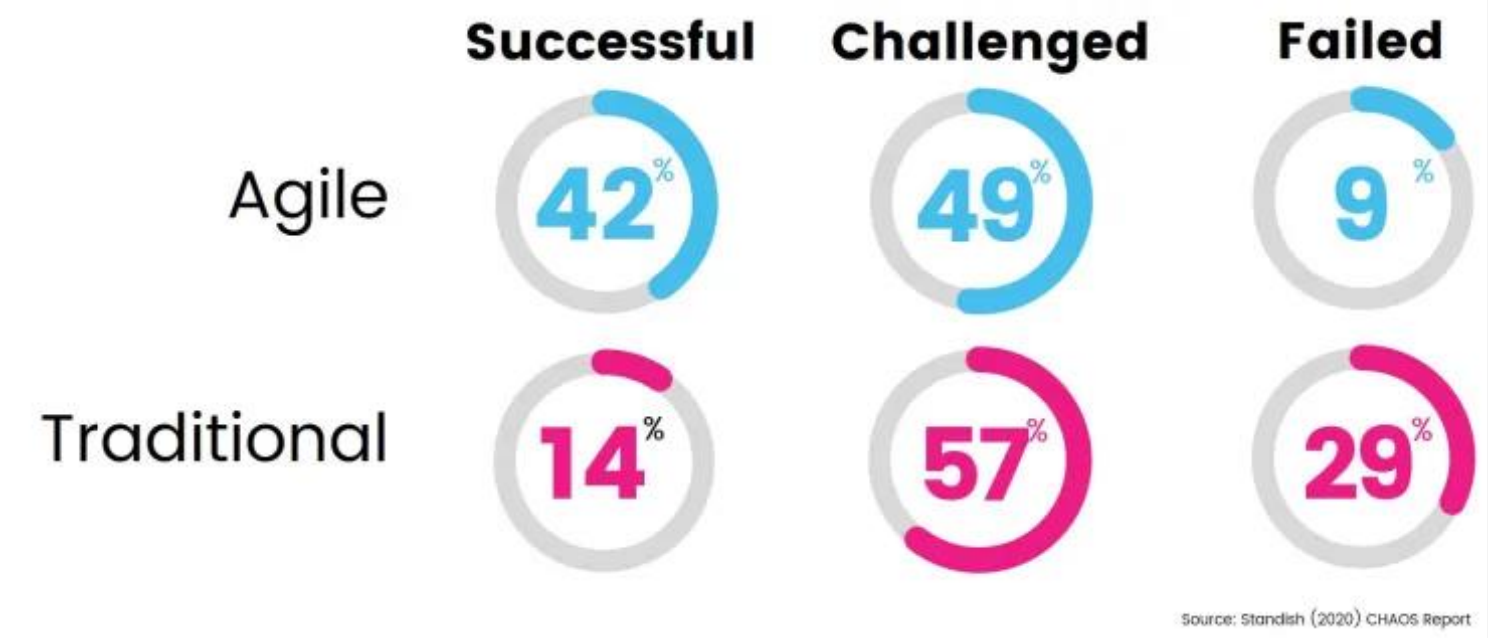
In 2020



https://zenexmachina.com/waterfall-vs-agile-a-knowledge-problem-not-a-requirements-problem/

Como é que compara com outras "engenharias"?

Integrated Requirements Engineering: A Tutorial

Ian Sommerville, *Lancaster University*

Before developing any system, you must understa
tem is supposed to do and how its use can supp
the individuals or business that will pay for that
volves understanding the application domain
tions, railways, retail banking, games, and so on); the syst
constraints; the specific functionality required by the stakeh
ple who directly or indirectly use the system or the informat

and essential system characteristics such as performance, security, and dependability. *Requirements engineering* is the name given to a structured set of activities that help develop this understanding and that document the system specification for the stakeholders and engineers involved in the system development.

This short tutorial introduces the fundamental activities of RE and discusses how it has evolved as part of the software engineering process. However, rather than focus on established RE techniques, I discuss how the changing nature of software engineering has led to new challenges for RE. I then introduce a number of new techniques that help meet these challenges by integrating RE more closely with other systems implementation activities.

The fundamental pr

The RE process varies
ing on the type of appl
oped, the size and culture
volved, and the software
used. For large military
tems, there is normally a
the systems engineering p
tensively documented set
ware requirements. For
veloping innovative softw
process might consist o
sions, and the product "
simply be a short vision s
software is expected to d

Whatever the actual pr
tivities are fundamental t

- *Elicitation*. Identify sources of information about the system and discover the requirements from these.
- *Analysis*. Understand the requirements, their overlaps, and their conflicts.
- *Validation*. Go back to the system stake-

This tutorial introduces the fundamental activities of requirements engineering and discusses recent developments that integrate it and system implementation.

- *The need for rapid software delivery.* Businesses now operate in an environment that's changing incredibly quickly. New products appear and disappear, regulations change, businesses merge and restructure, competitors change strategy. New software must be rapidly conceived, implemented, and delivered. There isn't time for a prolonged RE process. Development gets going as soon as a vision for the software is available, and the requirements emerge and are clarified during the development process.

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Analista de sistemas é um papel chave do SDLC

O **analista** de sistemas analisa a situação do negócio, identifica oportunidades de melhorias e projeta um sistema de informação para implementá-las.

Ser analista de sistemas é um dos trabalhos mais desafiantes na eng.a de software.

O principal objetivo de um analista de sistemas não é criar um sistema "topo de gama" (na perspetiva da tecnologia), mas **criar valor para a organização.**

The Systems Analyst: Skills

Agents of change

Identify ways to improve the organization
Motivate & train others

Skills needed

Technical: must understand the technology

Business: must know the business processes

Analytical: must be able to solve problems

Communications: technical & non-technical audiences

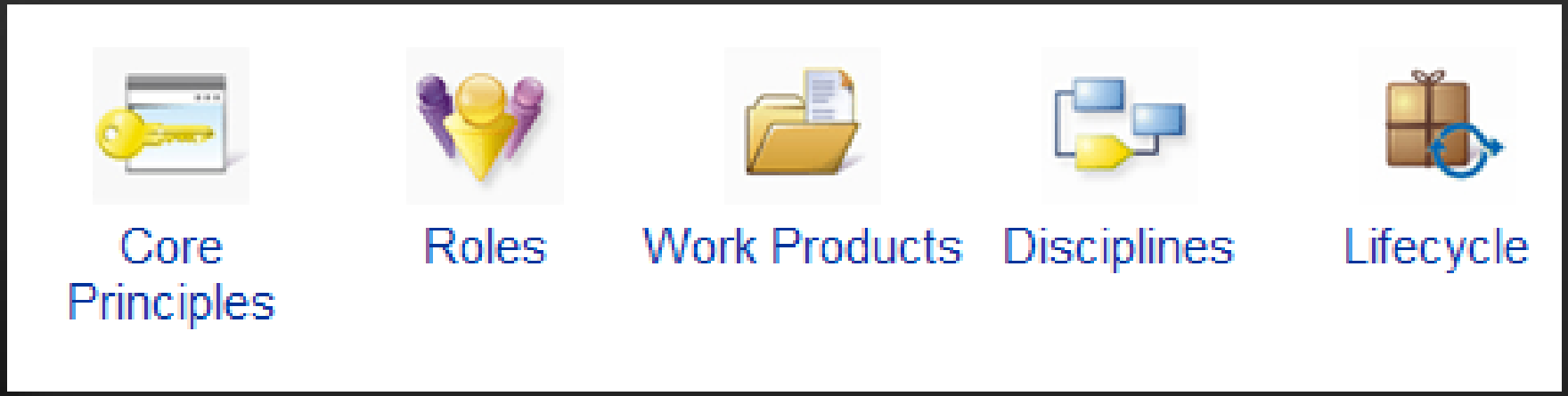
Interpersonal: leadership & management

Ethics: deal fairly and protect confidential information

Credit: Dennis et al, "*Systems Analysis and Design: An Object Oriented Approach with UML*", 5th ed.

O SDLC é concretizado em **processos de desenvolvimento**

O que é que inclui um processo?



https://sweet.ua.pt/ico/OpenUp/OpenUP_v1514/