Communication Systems based on Software Defined Radio (SDR)

Dr. Ing. Alejandro José Uriz

Technical / economic project management

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Business plan

A business plan is a documented strategy about the objectives and plans of a company. Describes the marketing plan, financial projections, market research, business purpose, and mission statement. It can also include the key personnel to achieve the goals, resources needed, and a timeline.

The Business Plan is a guide or orientation in the development of your company, but also an instrument to obtain financing.

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Source: https://blog.hubspot.es/marketing/que-es-plan-de-negocios

Executive Summary

An executive summary is a general description of a document. The length and scope of your executive summary will vary depending on the document you are summarizing, but in general an executive summary can be between one and two pages long. In the document, you'll want to share all the information important readers and participants need to know.

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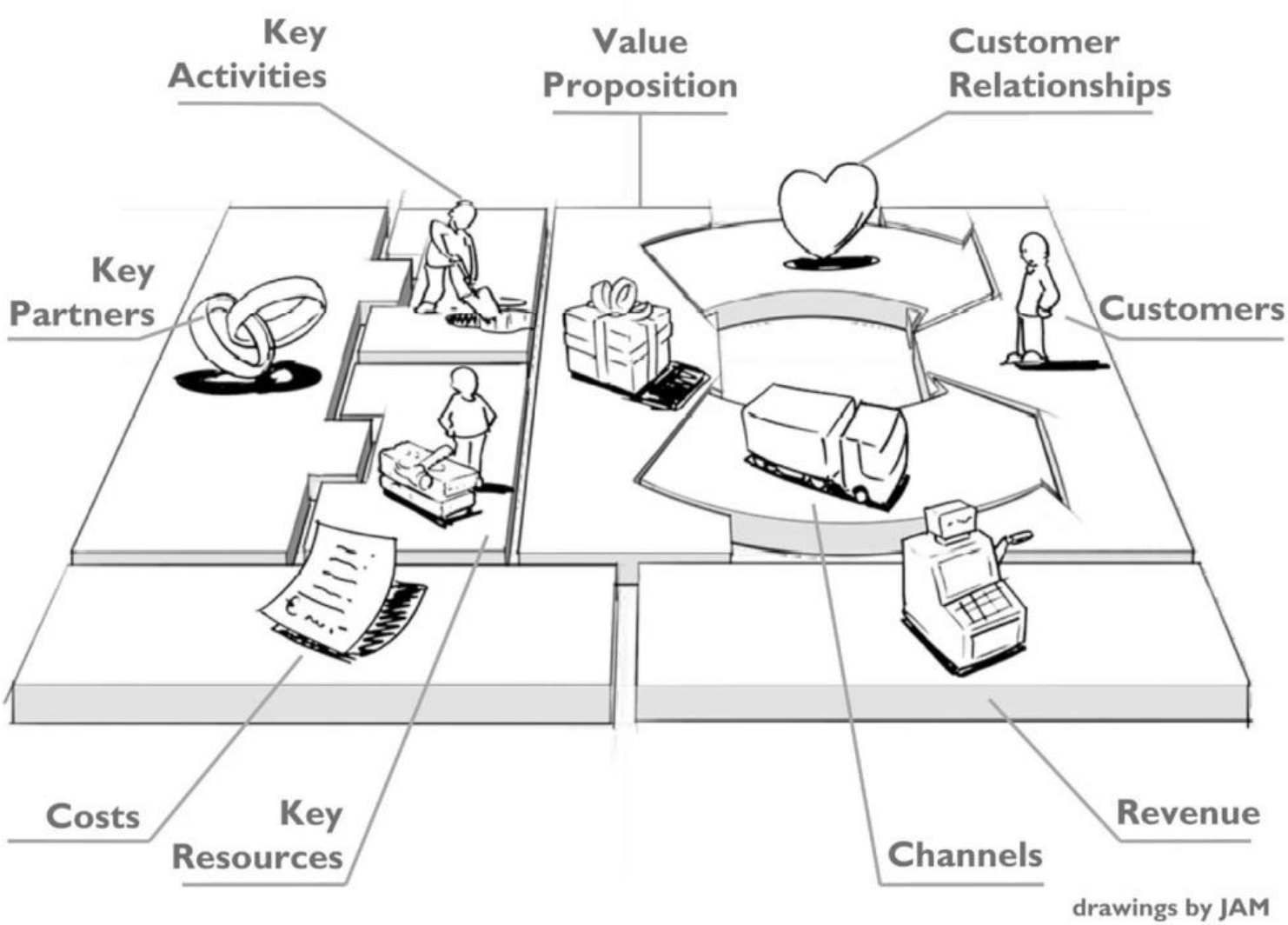
Source: https://asana.com/es/resources/executive-summary-examples

CANVAS Bussines Model



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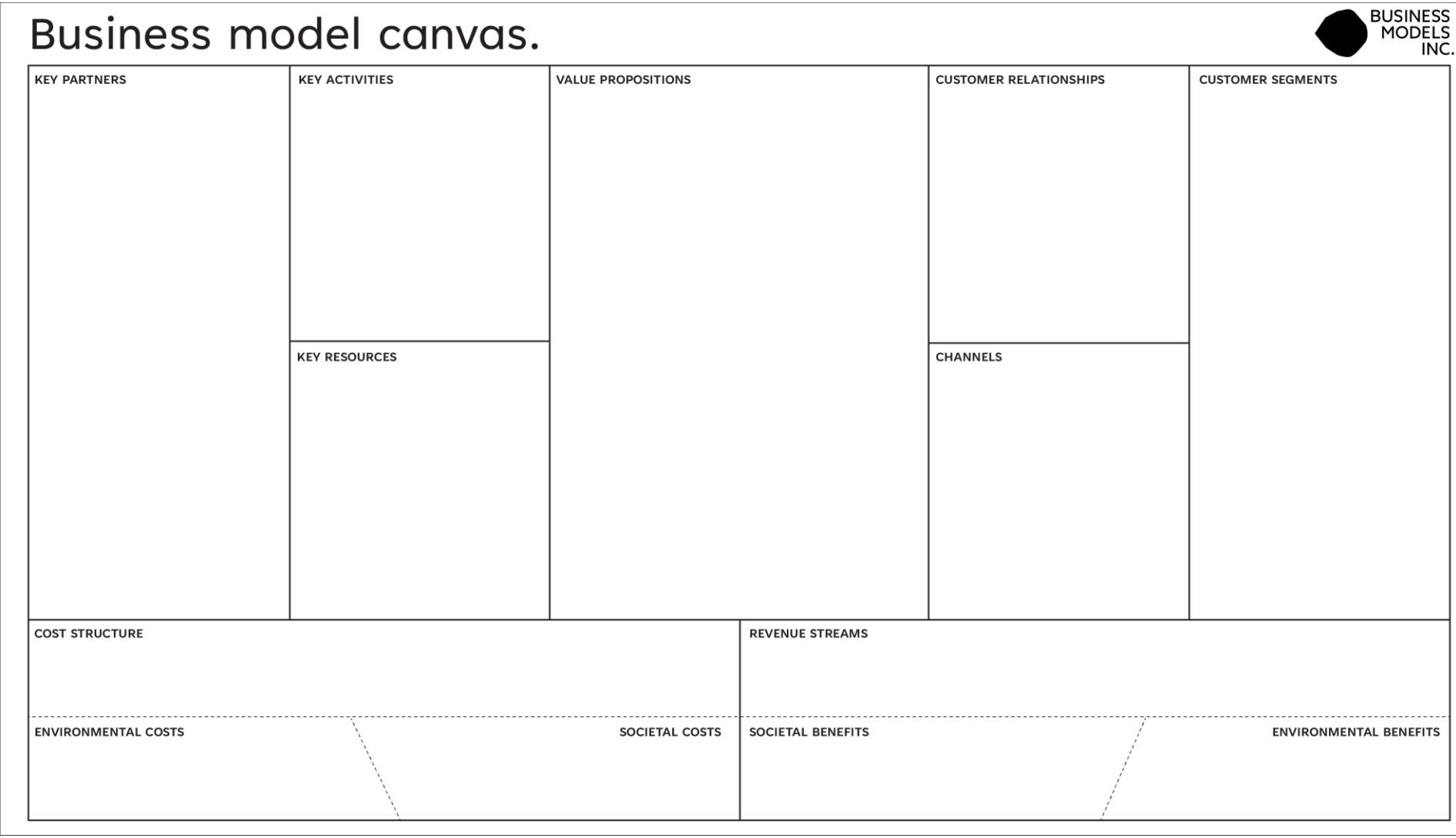
Source: https://asana.com/es/resources/executive-summary-examples

CANVAS Bussines Model



Source: https://www.businessmodelsinc.com/en/inspiration/tools/business-model-canvas

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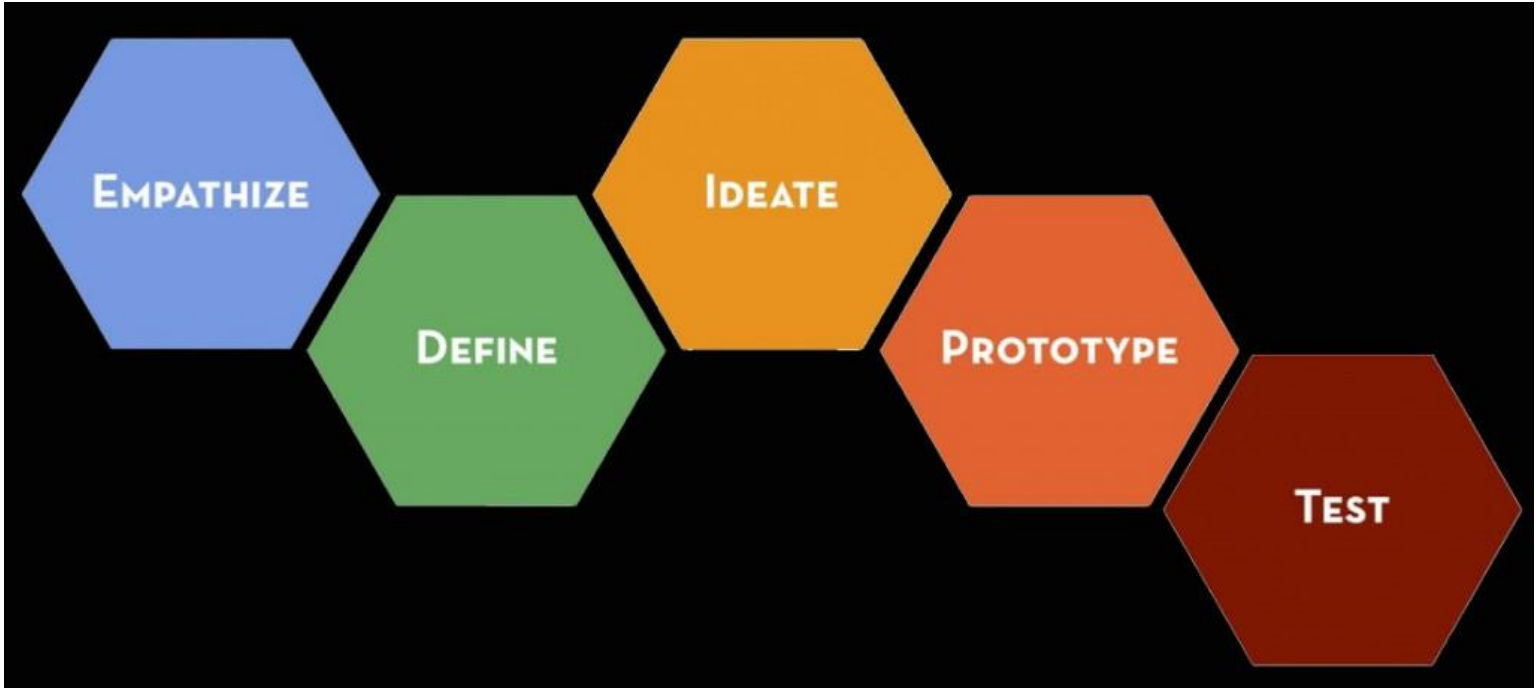
A Design Thinking Process

In this class we will normally apply the following, which is one version of a design thinking process. This Design Thinking process first defines the problem and then implements the solutions, always with the needs of the user demographic at the core of concept development. This process focuses on needfinding, understanding, creating, thinking, and doing. At the core of this process is a bias towards action and creation: by creating and testing something, you can continue to learn and improve upon your initial ideas.

Source: https://web.stanford.edu/class/me113/d_thinking.html



EMPATHIZE: Work to fully understand the experience of the user for whom you are designing. Do this through observation, interaction, and immersing yourself in their experiences.
DEFINE: Process and synthesize the findings from your empathy work in order to form a user point of view that you will address with your design.
IDEATE: Explore a wide variety of possible solutions through generating a large quantity of diverse possible solutions, allowing you to step beyond the obvious and explore a ideas.
PROTOTYPE: Transform your ideas into a physical form so that you can experience and interact with them and, in the process, learn and develop more empathy.
TEST: Try out high-resolution products and use observations and feedback to refine prototypes, learn more about the user, and refine your original point of view.

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Source: https://web.stanford.edu/class/me113/d_thinking.html

Lean startup

Lean startup is a methodology for developing businesses and products that aims to shorten product development cycles and rapidly discover if a proposed business model is viable; this is achieved by adopting a combination of business-hypothesis-driven experimentation, iterative product releases, and validated learning. Lean startup emphasizes customer feedback over intuition and flexibility over planning. This methodology enables recovery from failures more often than traditional ways of product development.

Central to the lean startup methodology is the assumption that when startup companies invest their time into iteratively building products or services to meet the needs of early customers, the company can reduce market risks and sidestep the need for large amounts of initial project funding and expensive product launches and financial failures. While the events leading up to the launch can make or break a new business, it is important to start with the end in mind. This means thinking about the direction in which you want your business to grow and how to put all the right pieces in place to make this possible.

Sources:
1 - https://en.wikipedia.org/wiki/Lean_startup
2- The Lean Startup. Eric Ries. United States. Crown Business (USA). 2011 (USA). ISBN 0307887898

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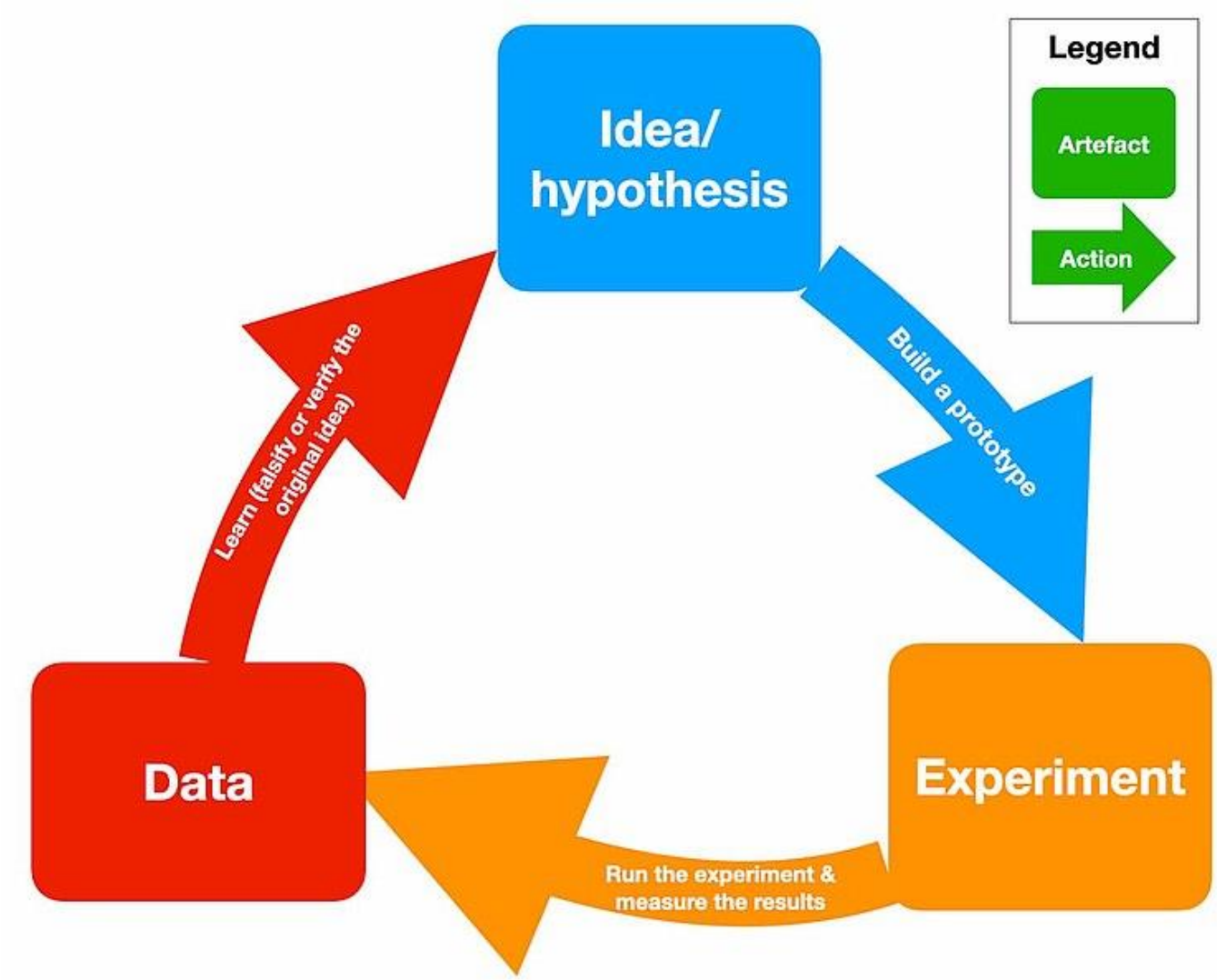

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Source: https://commons.wikimedia.org/wiki/File:Lean-StartUp-Cycle-EN.jpg

Technology readiness levels (TRL)

Technology readiness levels (TRLs) are a method for estimating the maturity of technologies during the acquisition phase of a program. TRLs enable consistent and uniform discussions of technical maturity across different types of technology. TRL is determined during a technology readiness assessment (TRA) that examines program concepts, technology requirements, and demonstrated technology capabilities. TRLs are based on a scale from 1 to 9 with 9 being the most mature technology.

TRL was developed at NASA during the 1970s. The US Department of Defense has used the scale for procurement since the early 2000s. By 2008 the scale was also in use at the European Space Agency (ESA). The European Commission advised EU-funded research and innovation projects to adopt the scale in 2010. TRLs were consequently used in 2014 in the EU Horizon 2020 program. In 2013, the TRL scale was further canonized by the International Organization for Standardization (ISO) with the publication of the ISO 16290:2013 standard.

Source: https://en.wikipedia.org/wiki/Technology_readiness_level

TRL definitions (European Union)

TRL 1 - Basic principles observed

TRL 2 - Technology concept formulated

TRL 3 - Experimental proof of concept

TRL 4 - Technology validated in lab

TRL 5 - Technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)

TRL 6 - Technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)

TRL 7 - System prototype demonstration in operational environment

TRL 8 - System complete and qualified

TRL 9 - Actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)

Source: https://en.wikipedia.org/wiki/Technology_readiness_level