The Technology method

Unit 1

Criterios de Evaluación

Bloque I: PROCESO DE RESOLUCIÓN DE PROBLEMAS TECNOLÓGICOS

1. Identificar las etapas necesarias para la creación de un producto tecnológico desde su origen hasta su comercialización, describiendo cada una de ellas, investigando su influencia en la sociedad y proponiendo mejoras tanto desde el punto de vista de su utilidad como de su posible impacto social. CAA, CSC, CCL, CMCT.

5. Valorar el desarrollo tecnológico en todas sus dimensiones. CAA, CSC, CEC.

Bloque II: EXPRESIÓN Y COMUNICACIÓN TÉCNICA

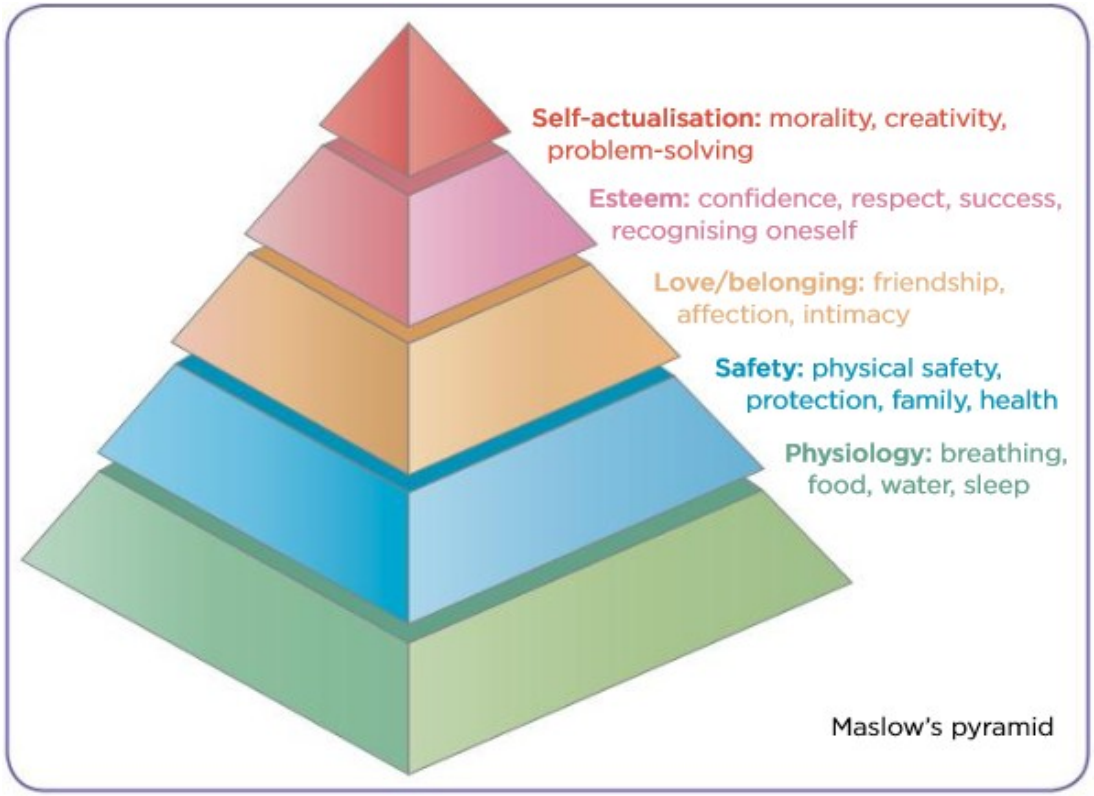
3. Explicar y elaborar la documentación técnica necesaria para el desarrollo de un proyecto técnico, desde su diseño hasta su comercialización. CMCT, CAA, SIEP, CCL, CEC.

Instrumento-> Criterio	Observación directa en clase	Cuaderno individual de Tecnología	Memoria de proyecto.	Objetos construidos o diseñados:	Pruebas escritas u orales individuales:	Trabajo en pizarra	Prácticas con simuladores.	Media
Bloque I - Crit1								
Bloque I – Crit5								
Bloque II – Crit3								

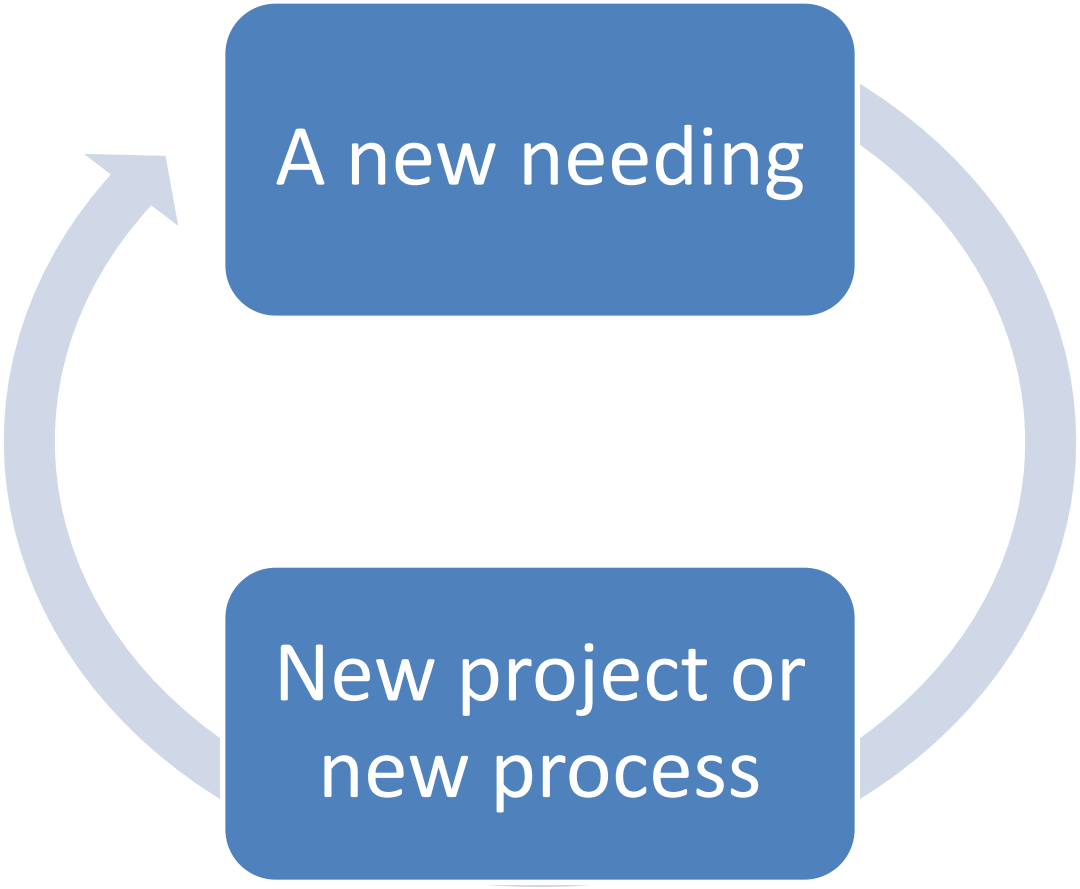
Why do we make objects?

Quick answer: **To Survive**

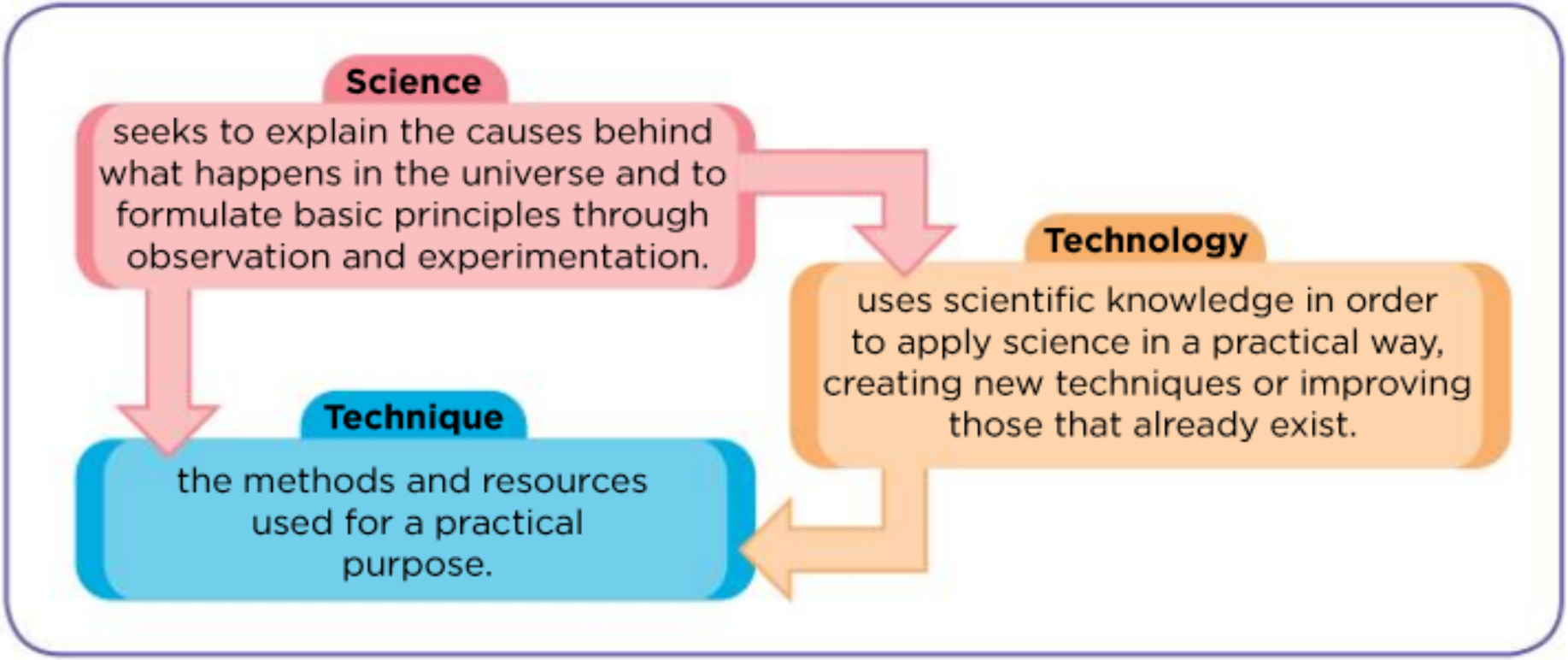
But the right answer is much deeper



The virtuous circle of managing objects and processes



How do we get them?



How do we get them?

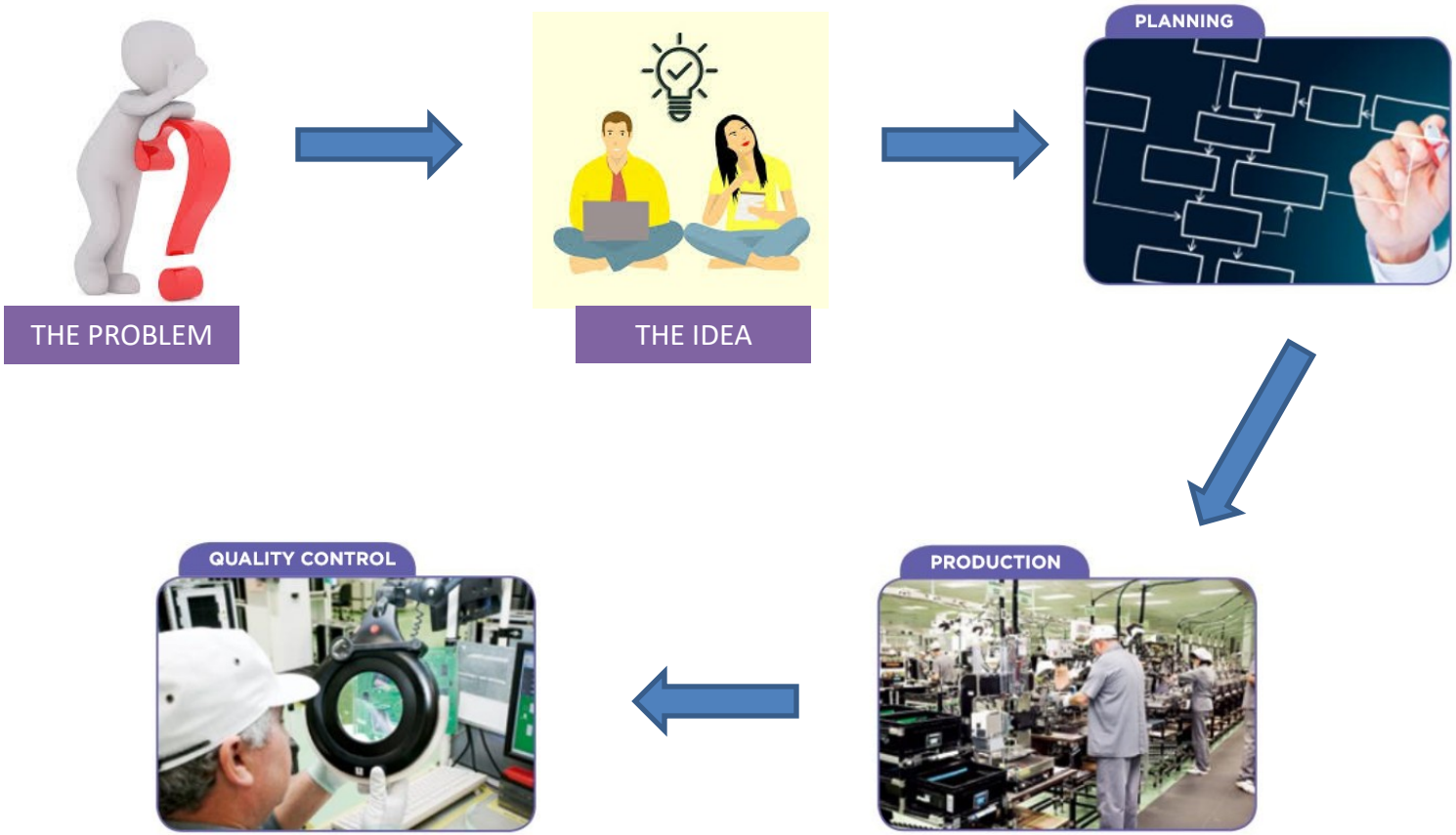
- Scientific method:

Science is based on observation and experimentation and aims to understand aspects of our environment and how it works.

- Technological method:

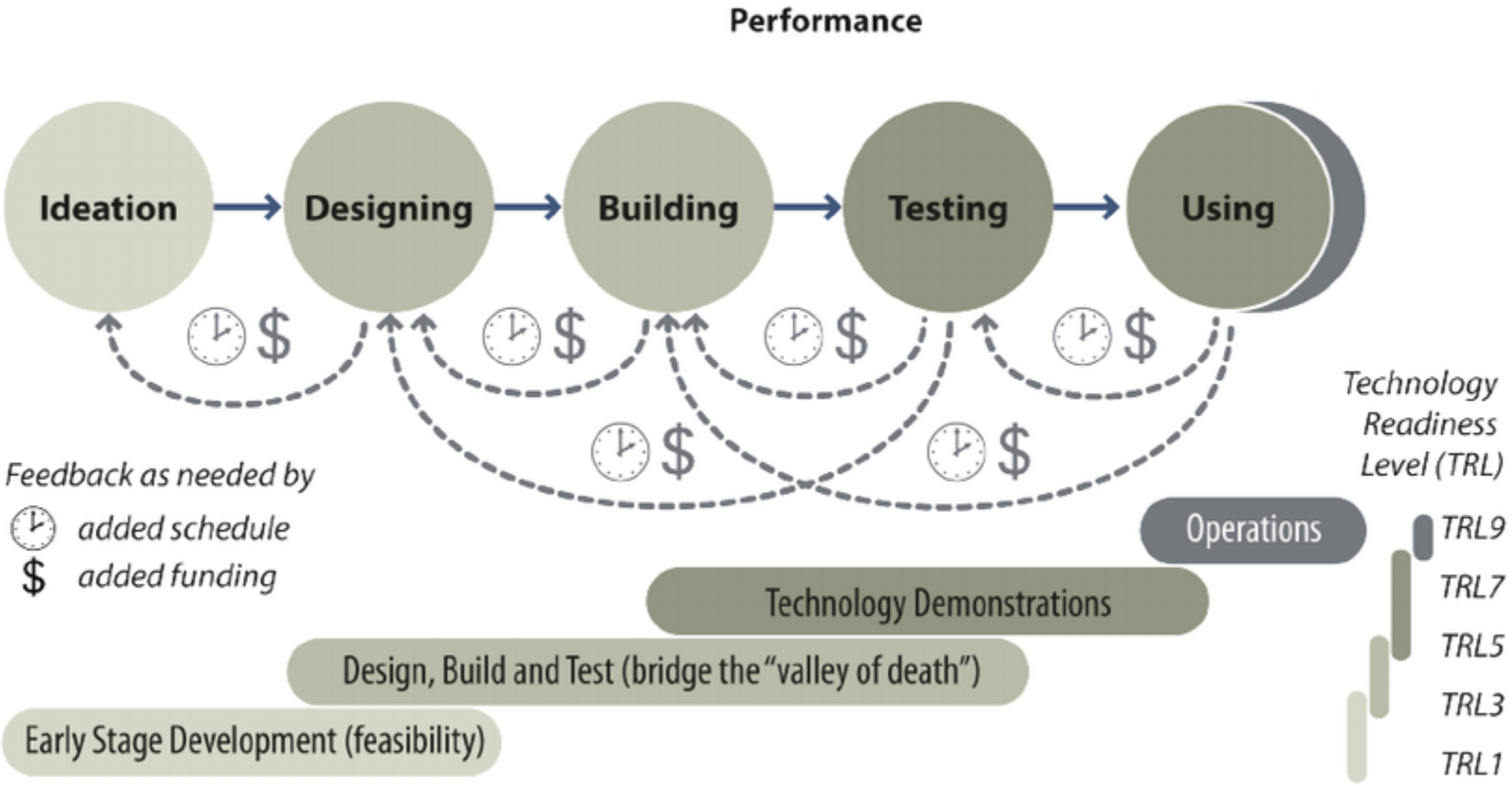
Technology is based on scientific laws and may be applied to science in a practical way.

What does a “techie” do?

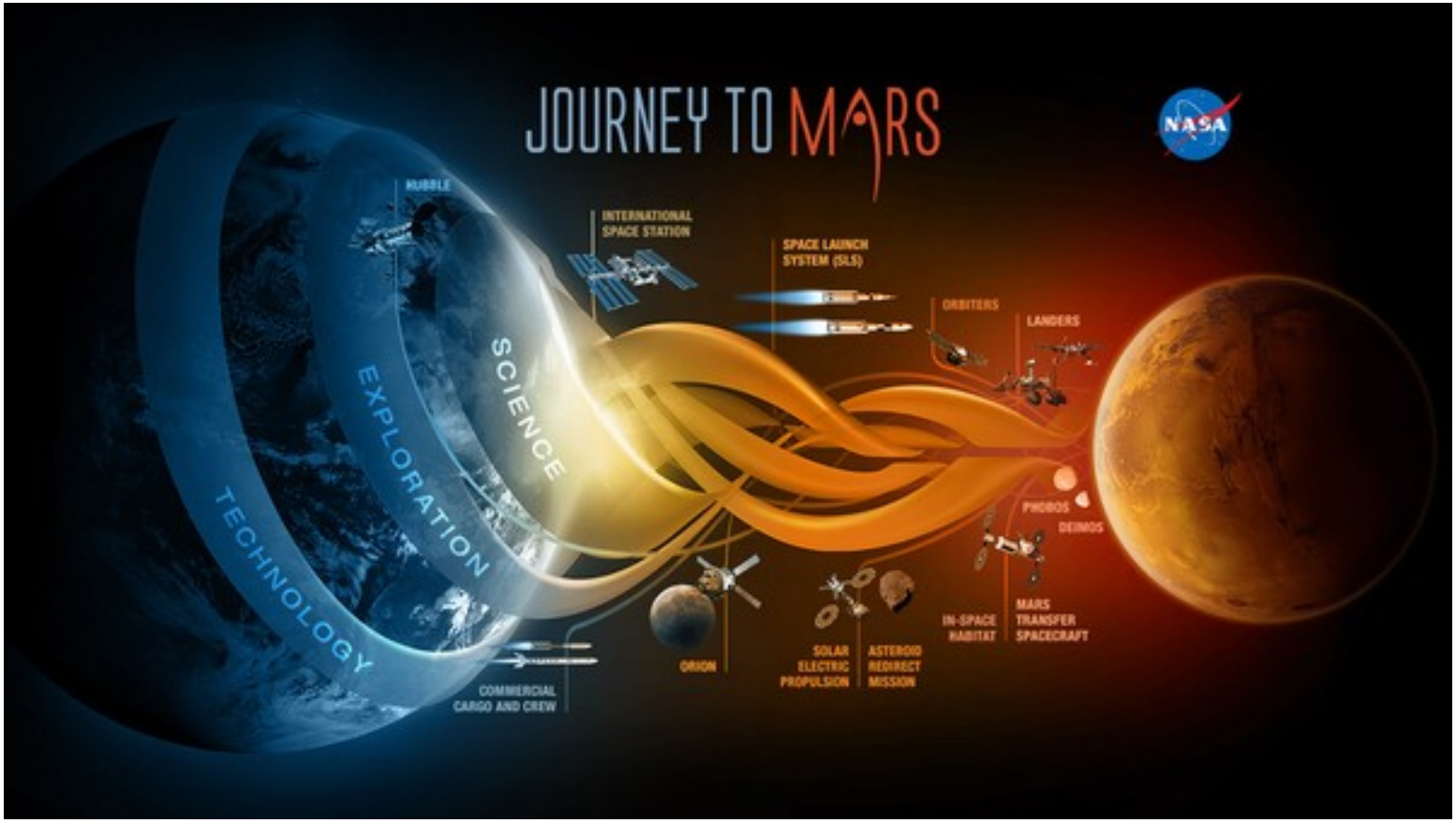


Techie: Technologist

THE TECHNOLOGICAL METHOD



An example to discuss



[Why is so hard to travel to Mars?]

A brief resume of changes in production models

Initial concepts of work (1750-1880)

Changes in model of job. Unemployment and migration grow.

The era of scientific manufacturing (1880-1910)

Scientific methods are applied to increase efficiency in manufacturing.

The mass production era (1910-1980)

The mass production got manufacturing cheaper.

The quality era (1980-1995)

Excess of production and higher energy costs made manufacturers compete in base of quality.

Personalised mass production (1995-present)

A more and more specialised production allows guests to satisfy their demands, and manufacturers deal to make their products according to guests' preferences.

Technological Innovation

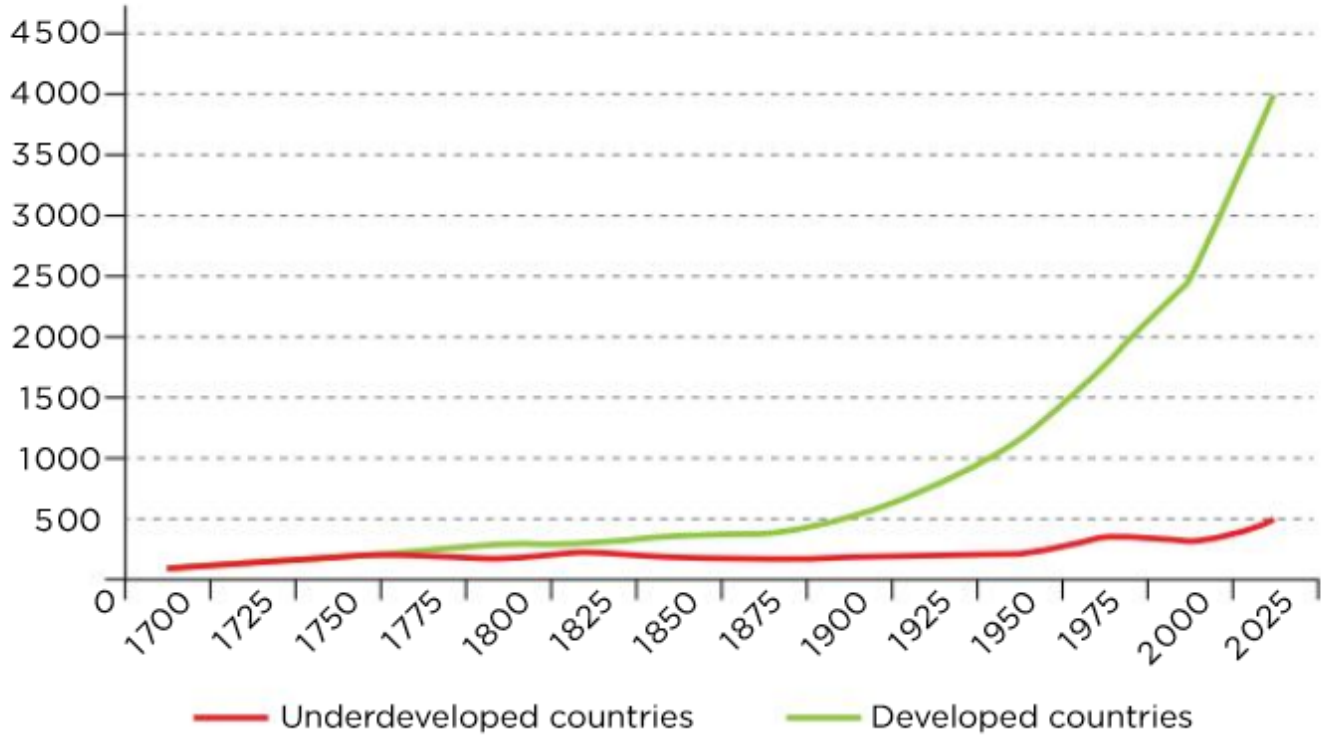
Any change based on knowledge generates value

- **Change**: Modification respect the traditional way of making or proceeding.
- **Knowledge**: all data or ideas generated through science, technique or technology.
- **Value**: Practical use and service to society.

Innovation allows to take advantage respect to the competition.

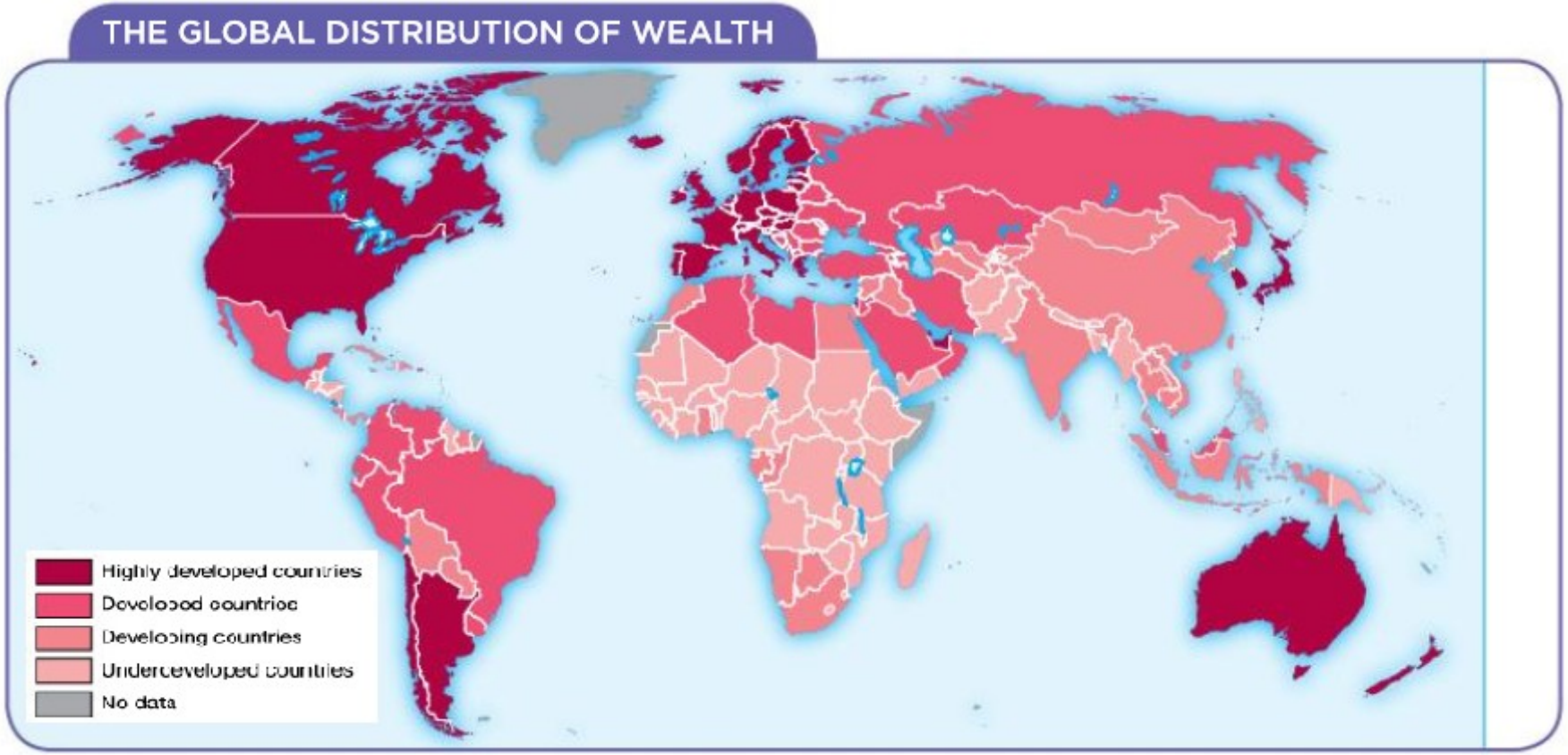
The result

Innovation as the driving force behind a country's development



Growth of average income per capita for both underdeveloped and developed countries.

The result


THE GLOBAL DISTRIBUTION OF WEALTH
Highly developed countries
Developed countries
Developing countries
Underdeveloped countries
No data

Can technology help to bridge the poverty gap?

The trend indicates negative perspectives but…

It's possible to contribute with developing countries in an affective way by:

- Paying raw materials with technology instead of currency (funds) to prevent corruption.
- Stablishing technical training programs.
- Developing infrastructures.
- Creating stable transport networks.
- Developing a culture of innovation.

Exercises

Understand, think, search

1 The African country Cape Verde is often considered to be one of the most significant examples of progress. In 2007, the United Nations removed Cape Verde from the list of the poorest countries in the world and placed it on the list of developing countries.

Do some research online to find out how Cape Verde made progress, then write a report to analyse the factors and work sectors that led to such a small country being able to slowly grow out of poverty.

Or

Exercises in Page 30 of the book

Requirements of a good design

- As simple as feasible.
  - Easy to build and few materials involved.
- Appropiate.
  - According to the purpose for which is made.
- Easy to handle and safe.
  - It’s use has to be simple and safe.
- Cheap.
  - The easier to be built, the cheaper it results.