**How do scientific advancements shape the trajectory of societies?**

Science and Technology have consistently driven profound societal transformations. From the birth of agriculture to the digital revolution, these advancements have reshaped lifestyles, redefined occupations, and influenced social structures.

## Historical Shifts driven by Science and Technology

**Agriculture**: Enabled the transition to sedentary lifestyles and supported the growth of densely populated settlements.

**Industrial Revolution**: The steam engine revolutionised trade, industry, and economic structures, catalysing urbanisation and new professions.

**Standardised currency**: Replaced barter systems, enabling more complex and global trade networks.

**IVF technology** : Addressed infertility, transforming family dynamics and societal perspectives on reproduction.

## The Abstractification of industry and value creation

Societal development follows a transition in economic sectors.

**PRIMARY (Agriculture)** → **SECONDARY (Manufacturing)** → **TERTIARY (Services)**

A key example of this progression within the tertiary sector is the insurance industry, which has evolved significantly over time.

### Case study: The evolution of the insurance industry

1. Babylonian merchants: used cattle as collateral for merchandise.
2. Amsterdam (1500s): underwriters insured transatlantic trade in coffeehouses.
3. Modern era: companies like AIG manage vast claims with advanced systems.

This evolution reflects increasing reliance on technology and expertise in value creation.

### Observation 1: Growing power of technically trained professionals

Mathematically and technically trained individuals hold increasing influence in society. Their expertise is critical for modern industries and other fields of research.

Examples:
- Marketing now includes data science and statistics.
- Ecology incorporates complex dynamical systems analysis.

### Observation 2: Accelerating pace and complexity of research

Scientific research is growing faster, with increasingly technical and specialised areas of study. This creates a widening gap between cutting–edge research and public understanding.

Examples:
- Difficulty for individuals to grasp the inner mechanics of everyday technologies.