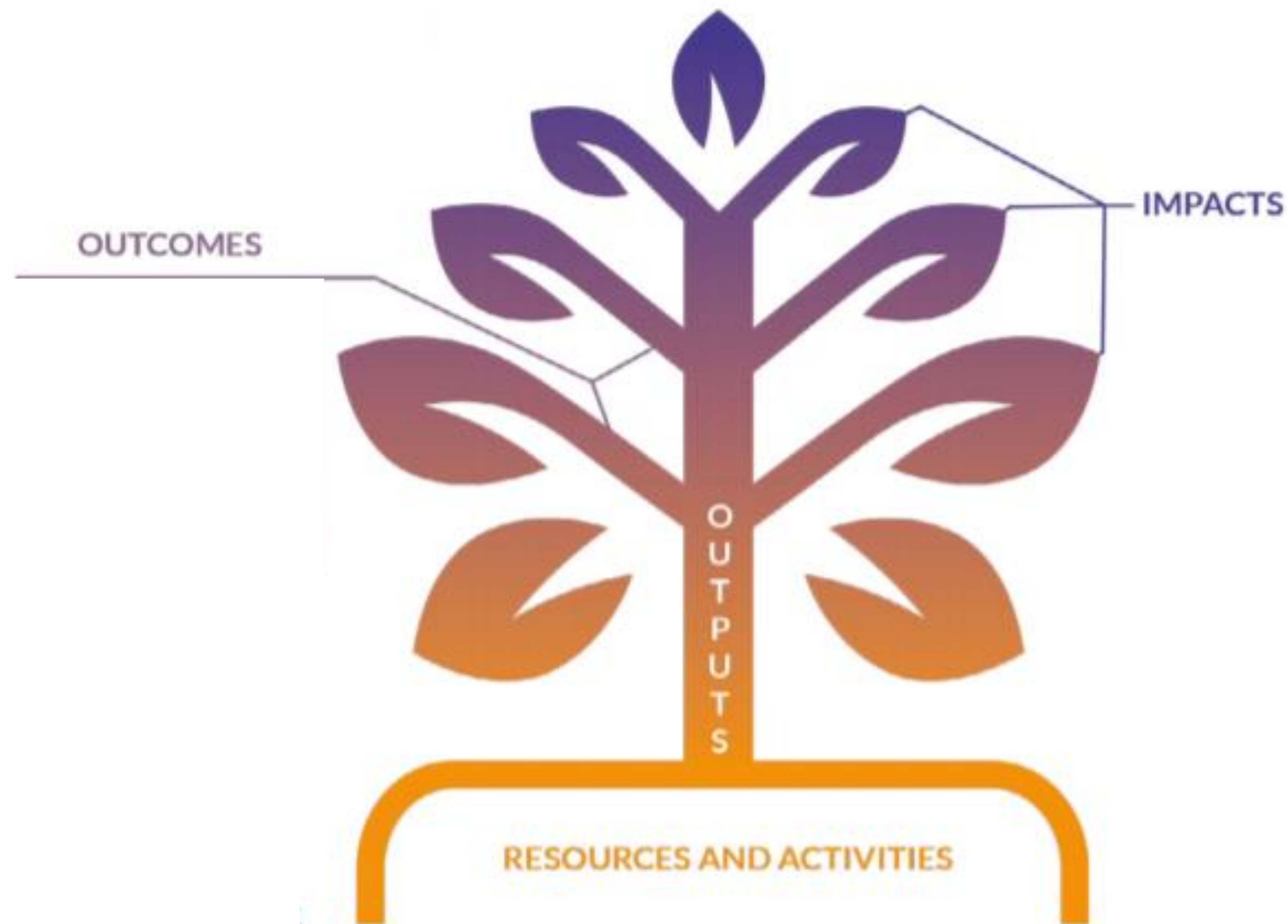
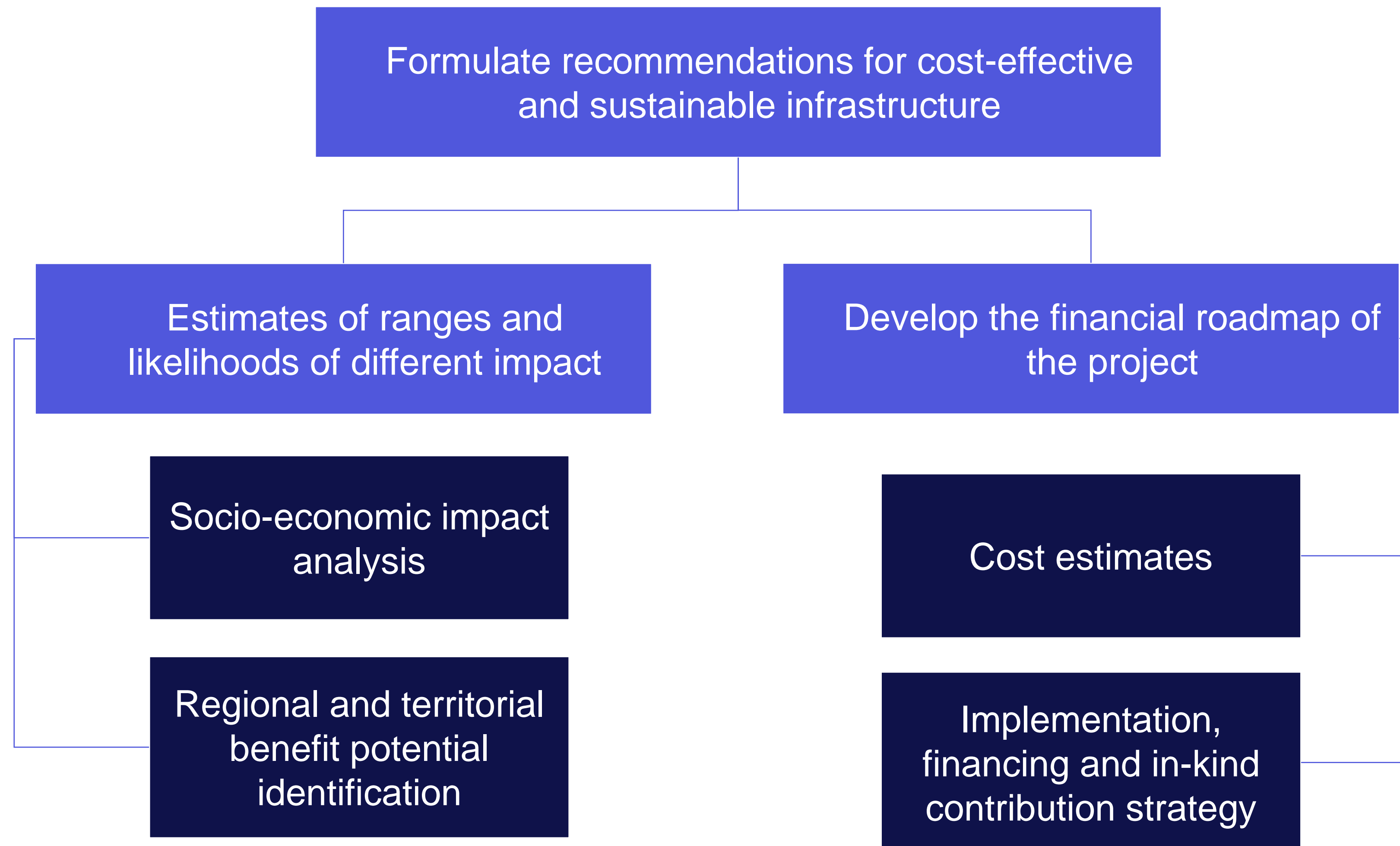


PLAN FOR THE SOCIO-ECONOMIC IMPACT STUDY

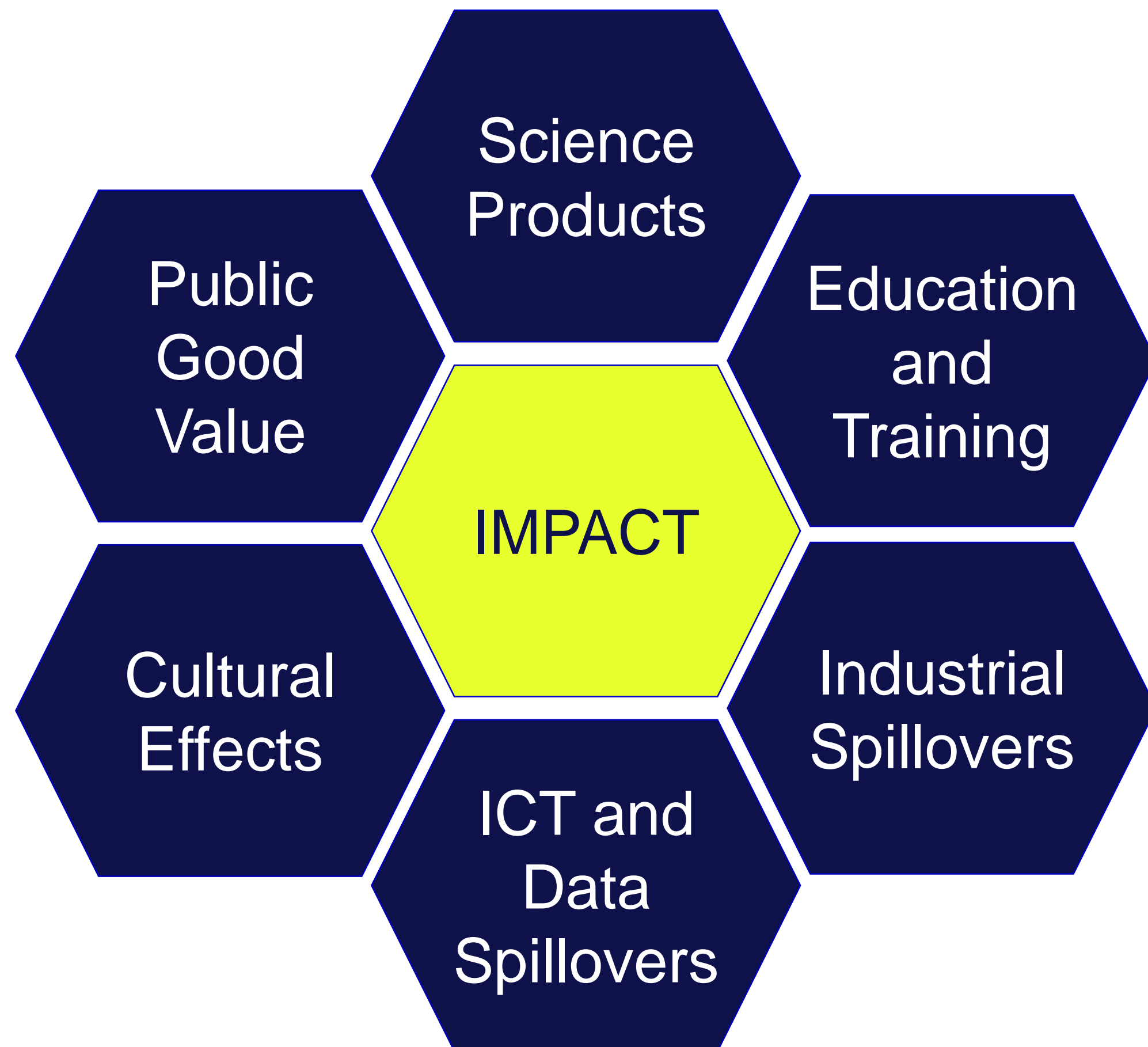
Emanuela Sirtori (CSIL)
 Tuesday, 10 November 2020, 13:40-14:00



WP 4 IN A NUTSHELL



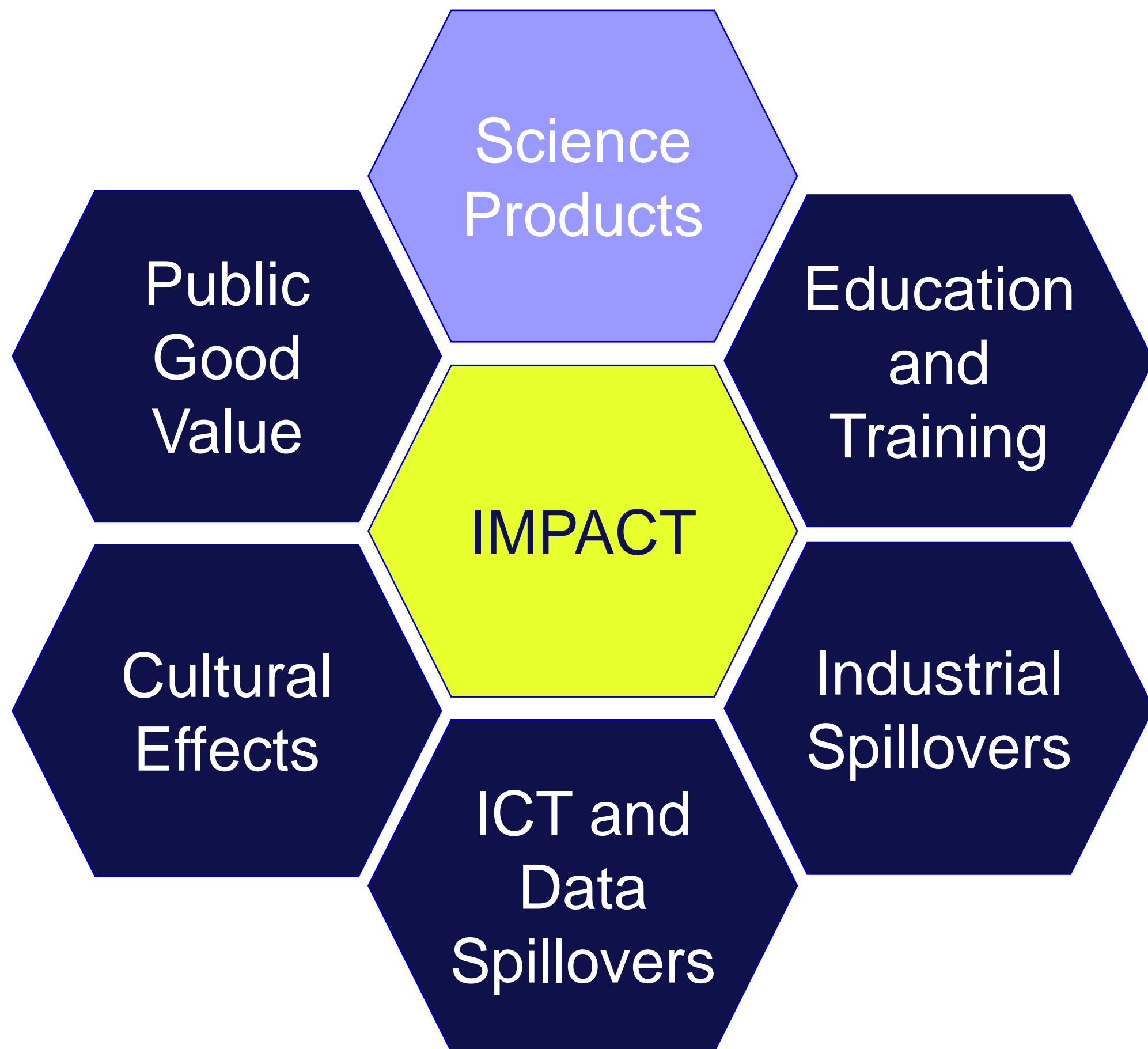
SOCIO-ECONOMIC IMPACT PATHWAYS: How to analyse them



Overall approach

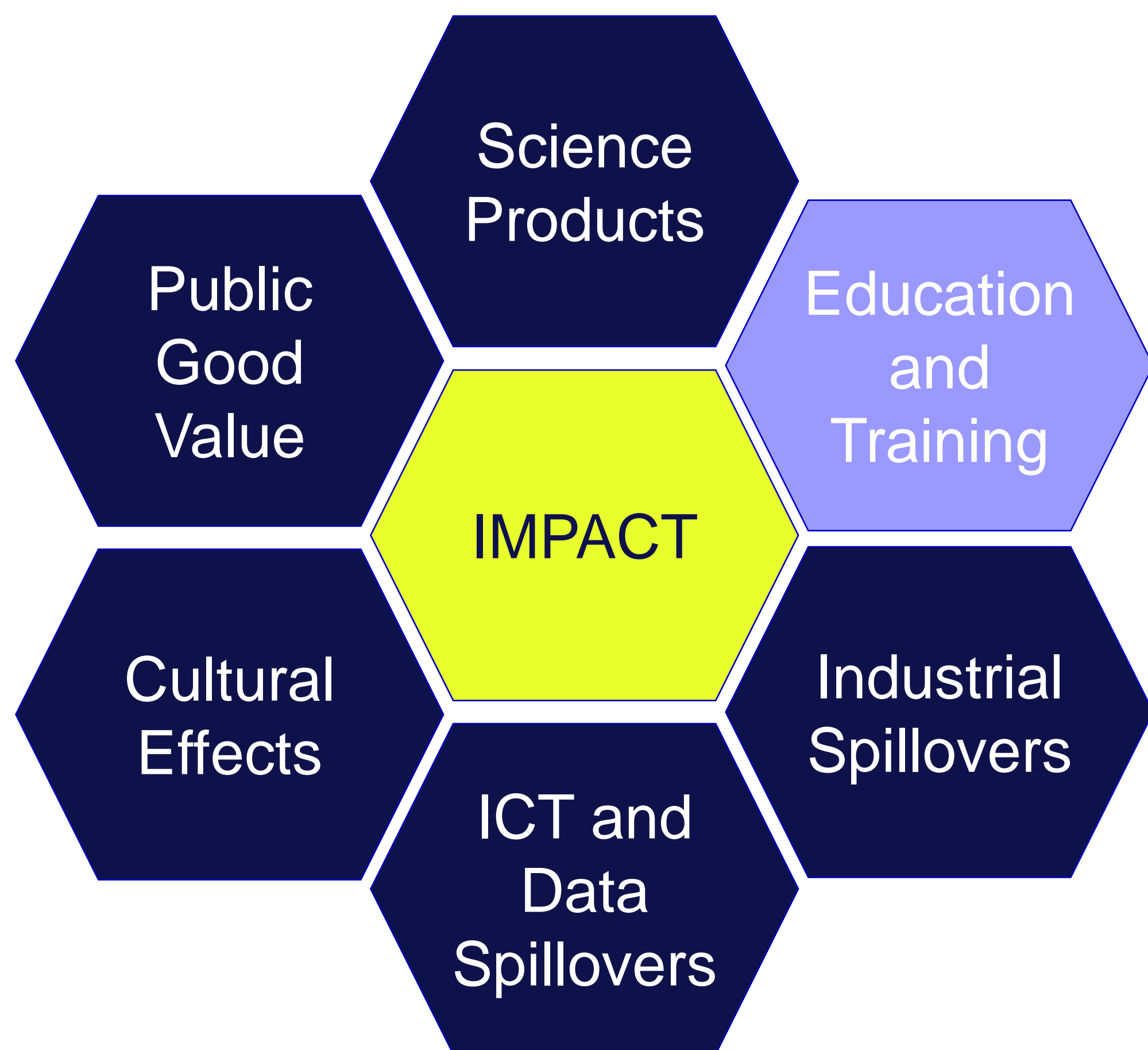
- Long-time perspective, covering the entire life time of the FCC-ee
- Benefits translated into monetary terms
- Build on historical data and expert opinion
- Probabilistic model to derive the estimates
- Prudence and transparency

ASSESSING THE VALUE OF Science Products



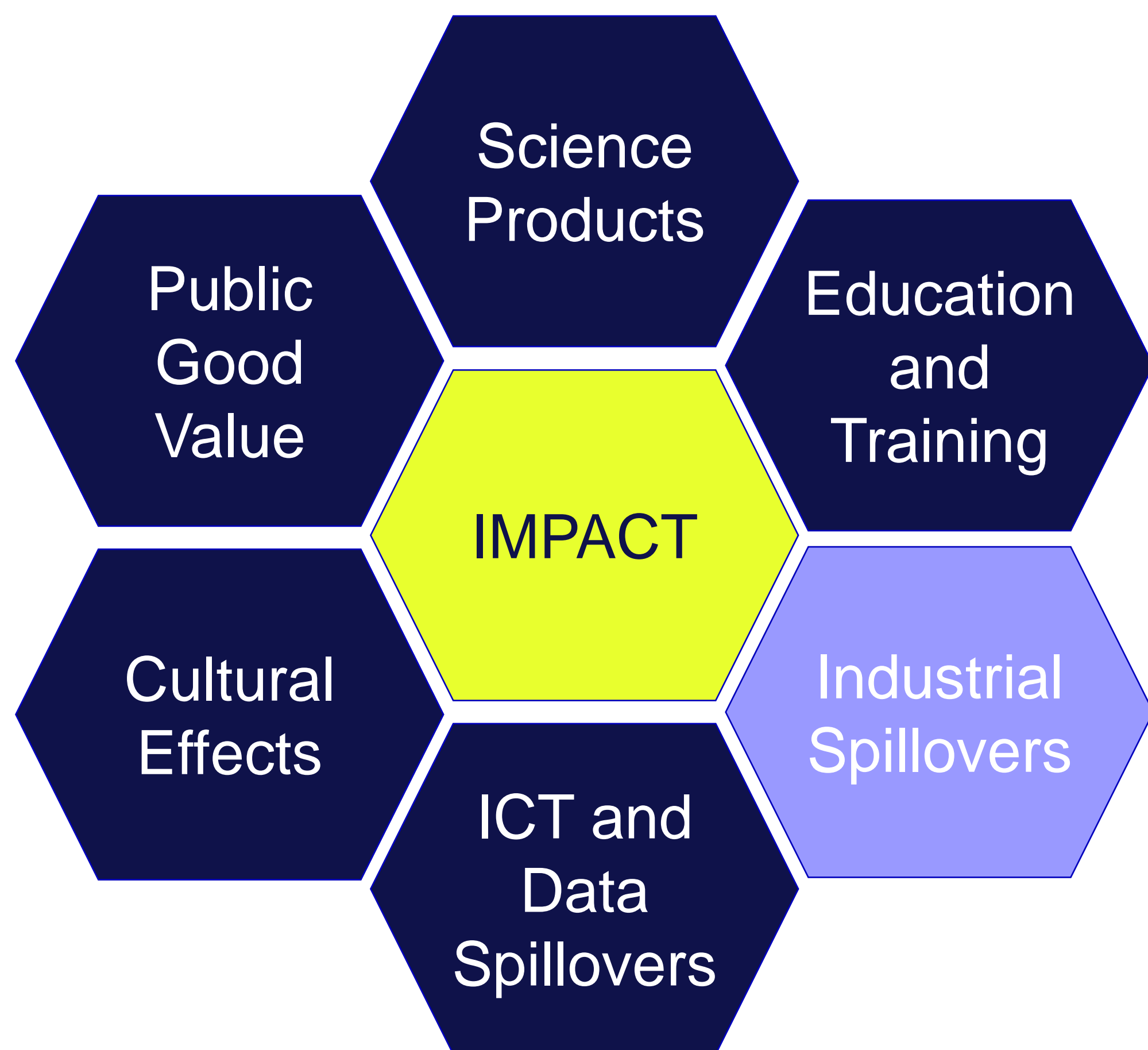
- **Science products:** publications, pre-prints, conference proceedings
- **Bibliometric models** to estimate the numbers of science products
- Economic value proxied (e.g.) by the production **opportunity cost**

ASSESSING THE VALUE OF Education and Training



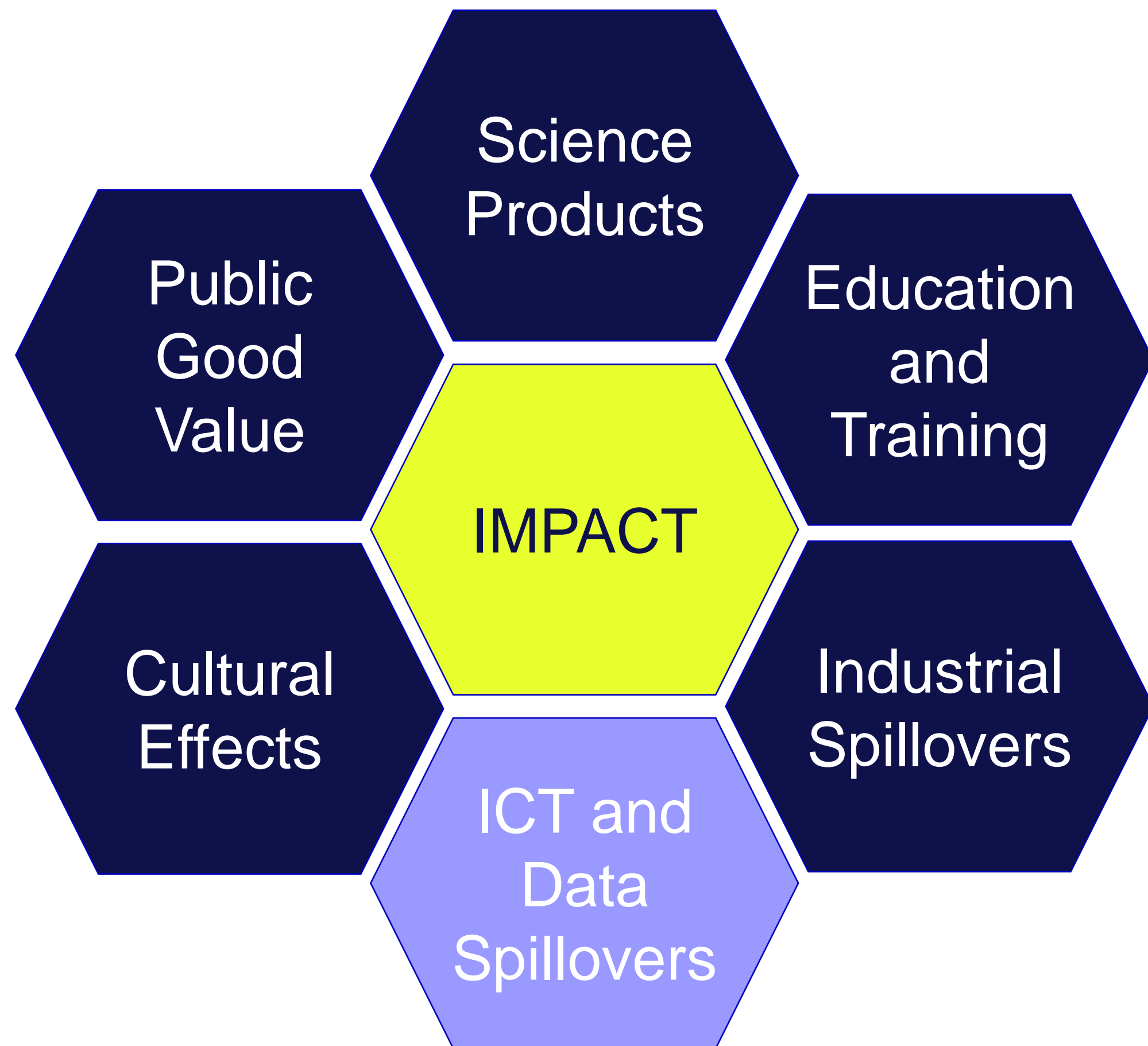
- **Beneficiaries:** PhD students, young users, post docs, technical students, fellows
- **Salary function:** job sector, country, duration of stay at CERN, career duration
- **CERN Salary premium:** past and ongoing survey

ASSESSING THE VALUE OF Industrial Spillovers



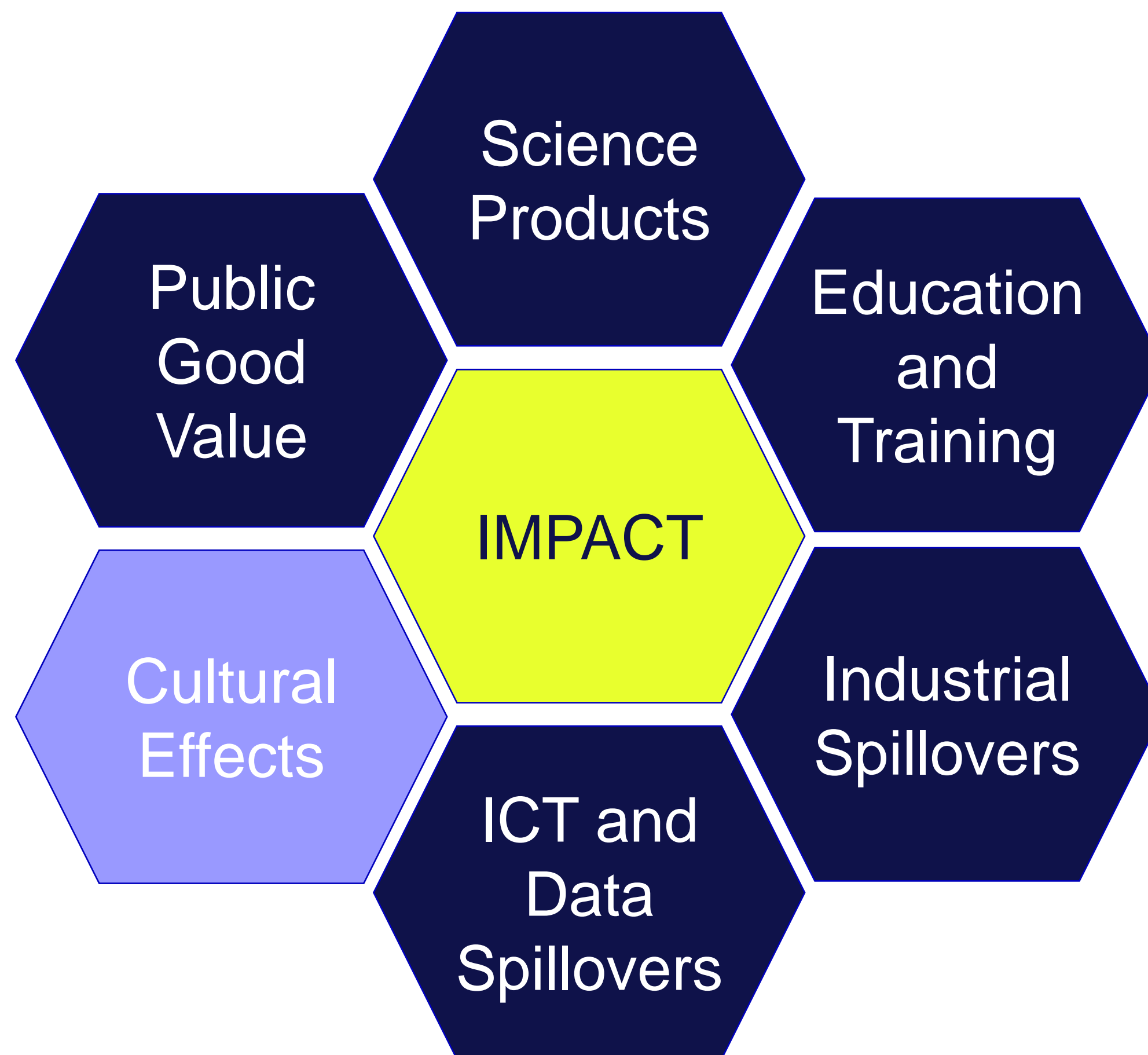
- **Procurement** cost and degree of innovativeness (high-tech and low-tech)
- Spillover effects on **innovation, learning and reputation**
- **Utility/Sales ratio** and profitability gain, based on past and new surveys, and balance sheets data
- Links with the **Regional benefits analysis**

ASSESSING THE VALUE OF ICT and Data Spillovers



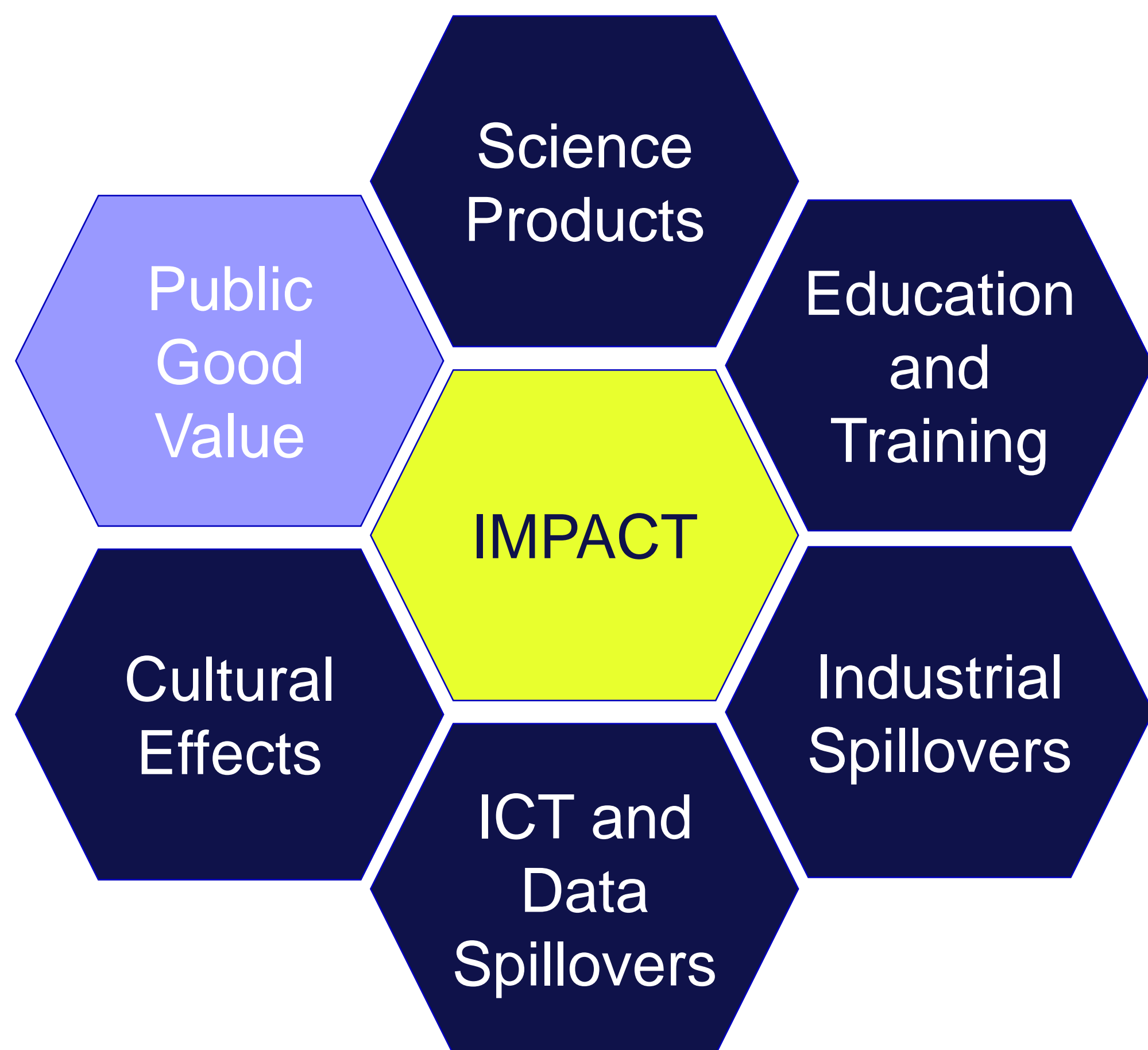
- **Open source software** (e.g. Indico, Zenodo)
- Number of **external users**
- Economic value:
 - Hypothetical **Willingness to Pay** (survey)
 - Benchmark given by any comparable software, not available for free

ASSESSING THE VALUE OF Cultural Effects



- **Onsite visitors** to CERN
- Willingness to pay, proxied by the **travel cost** method (survey)
- **Virtual visitors** to social media and web pages
- **Valuation?** One option: value of time spent by visitors

ASSESSING THE VALUE OF Public Good Value



- Value of science to the **global society**, not already captured by benefits of science products and for other users
- **Willigness to pay** for CERN by adult citizens: previous surveys in CH and FR
- **Probabilistic model** to forecast the WTP in other countries based on some key parameters

OUTPUTS OF THE SOCIO-ECONOMIC IMPACT ANALYSIS

- **Deliverable D4.1:** Plan for research infrastructure socio-economic impact analysis (M10)
- **Deliverable D4.3:** Socio-economic impacts of the lepton collider-based research infrastructure (M36)
- The **mathematical model** for the estimation of impact
- **Papers and technical reports** focusing on specific impact pathways

Any questions or suggestions?

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