

# **Cost-Benefit Indicators to Assess SDI Impact**

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# Presentation

- ***Before you do a Cost-Benefit study.***
- ***Cost-Benefit metrics.***
- ***Cost-Benefit Methodologies.***
- ***Cost-Benefit issues.***
- ***Cost-Benefit metrics as assessment Indicators.***
- ***Alternatives to CBA.***
- ***The ANSWER!***

## Before the Cost-Benefit Analysis (CBA)

- .Define your 'SDI'.**
- .Define your goal for the CBA.**
- .Define your target audience.**
- .Define your (preferred) CBA Methodology.**
- .Define your time frame.**

## Before the Cost-Benefit Analysis (CBA)

- **Agree on value propositions to be used in the analysis (tangible, intangible benefits).**
- **Agree on assumptions made (including weighting factors, etc.).**
- **Agree on your 'experts' and level of stakeholder engagement.**

# Cost-Benefit Metrics

- **What type of CBA & metric?**
  - **Return on Investment (ROI)**
  - **Net Present Value (NPV)**
  - **Economic Value (EV) - value to the economy in X years, in Y years ('economic value' = ?)**
- **Other metrics?**
  - ♦ **Payback period to recover the investment**
  - ♦ **We can now do 'A' (or better than before)**

# Cost-Benefit Methodology

- **What type of methodology?**
  - **CBA (traditional, financial / monetary)**
  - **Cost Effectiveness Analysis (CEA)**
  - **Value Measuring Methodology (VMM)**
  - **GeoVMM (variant of VMM – NASA ROI work)**
  - **Social Cost Benefit Analysis (SCBA)**
  - **Multi-Criteria Analysis (MCA)**
  - **Social Multi-Criteria Analysis (SMCA)**

# *CBA Issues*

- **CBAAs are riddled with assumptions.**
  - **More complexity = More assumptions.**
  - **More assumptions = Less believable.**
  - **Less believable = Less valuable to do.**
- **Depends upon quality of 'experts'.**
- **Depends upon resources available to conduct the study & analysis - and on stakeholders.**
- **Please separate “GI/SDI benefit” from that of generic “information infrastructure” benefit.**

## *Value of C-B metrics as SDI assessment indicators*

- What is a metric such as “ROI = 112%” actually measuring – if the final 'metric' is presented to decision-makers with inadequate metadata (who, how, why...).
- What valuable assessment information is lost when the message “NPV = €1.2 billion” is conveyed to SDI developers - in regard to all the other benefits of an SDI.

# Alternatives to (traditional) CBAs

- **Multi-Criteria Analysis (MCA).**
  - Multi-objective decision making, Multi-objective decision support system (MODSS), and Multi-criteria decision aid
- **Collection(s) of specific Case Studies.**
- **Business cases.**
- **Impact analyses & Risk assessments.**
- **Computational simulation models. (NB-Sim)**
- **Combinations of any or all of the above.**
- **But these don't lead to easily identified 'indicators'.**

## INSPIRE CBA/ROI Workshop, Jan. 2006

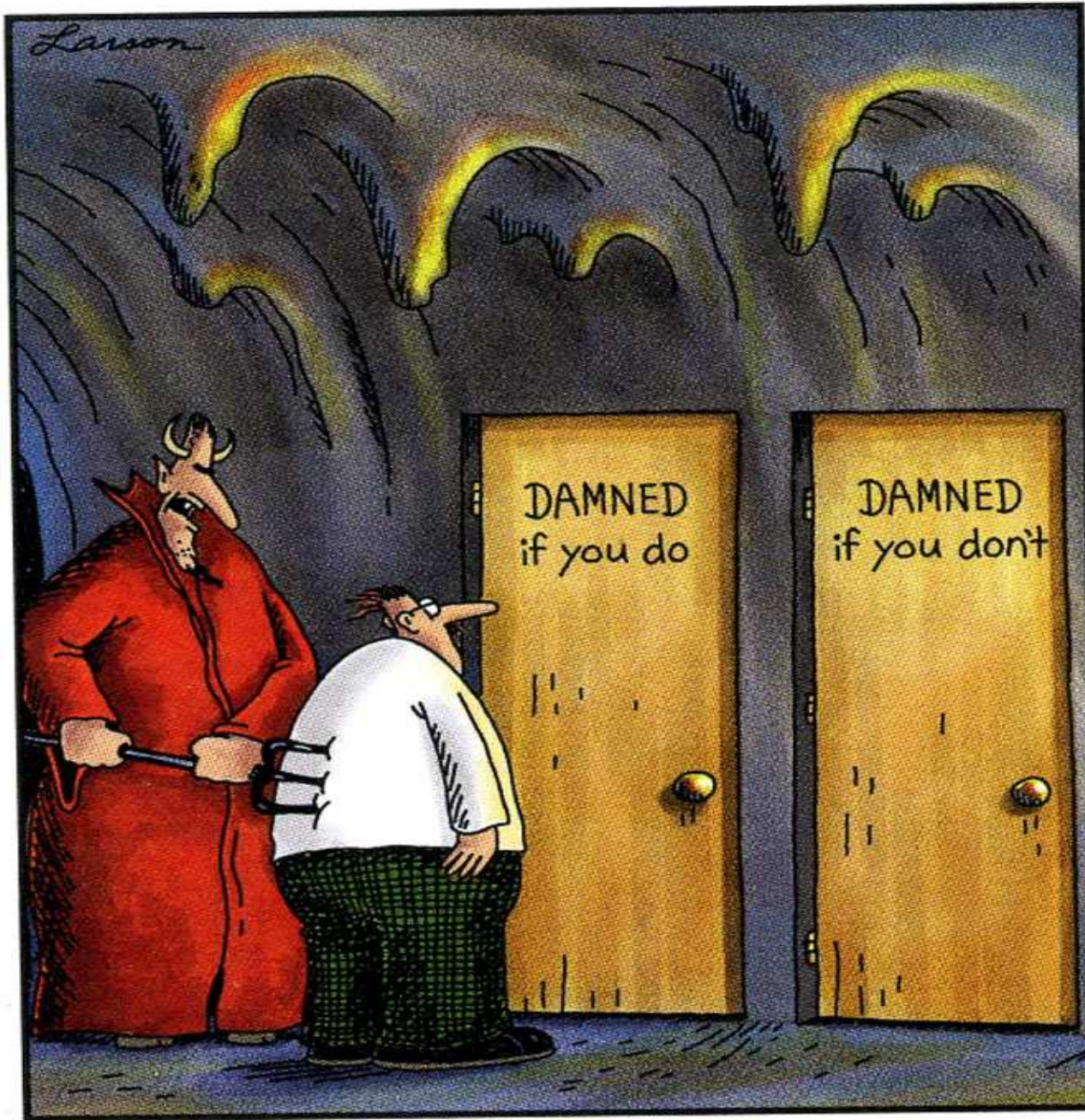
**“It is (probably) not possible to use a (standard) CBA methodology, with a single success criteria/metric, to assess the cost-benefit for an entire information infrastructure.”**

# *Value of C-B metrics as Indicators*

**“The answer is 42.”**

**- Douglas Adams**

***Hitch-hiker's Guide to the Universe  
Life, the Universe and Everything***



“C’mon, c’mon—it’s either one or the other.”

**Thank you for your attention.**

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