

WORLD METEOROLOGICAL ORGANIZATION

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CONSULTATIVE MEETINGS
ON HIGH-LEVEL POLICY ON SATELLITE MATTERS

ITEM: 3

TWELFTH SESSION

GENEVA, SWITZERLAND, 21 JUNE 2014

Original: ENGLISH

NOAA's JPSS ECONOMIC BENEFIT ANALYSIS

(Submitted by NOAA NESDIS)

Summary and Purpose of Document

To provide insight into the economic benefit analysis carried out by NOAA for the Joint Polar Satellite System (JPSS). The methodology uses the WMO Observing Systems Capability Analysis and Review tool (OSCAR).

ACTION PROPOSED

The twelfth session is invited to note the information provided.

NOAA's JPSS Economic Benefits Analysis



Charles Wooldridge, Deputy Director
Interagency & International Affairs Division
NOAA Satellite & Information



Saturday, 21 June 2014

Purpose/Methodology

What is the Value of Our Investment?

- Survey past economic benefits analyses on environmental satellites and numerical weather prediction.
- Analyze the methodologies/results of collected studies.
- Consolidate findings and apply them to JPSS. Draw any possible conclusions from the findings and list areas that need further study.
- Produce a report on the findings which is both defensible and authoritative

JPSS Socio-Economic Benefit Analysis



Prepared for: United States Department of Commerce
National Oceanic and Atmospheric Administration
JPSS (Joint Polar Satellite System) Program Office



A collaborative mission between NOAA and NASA

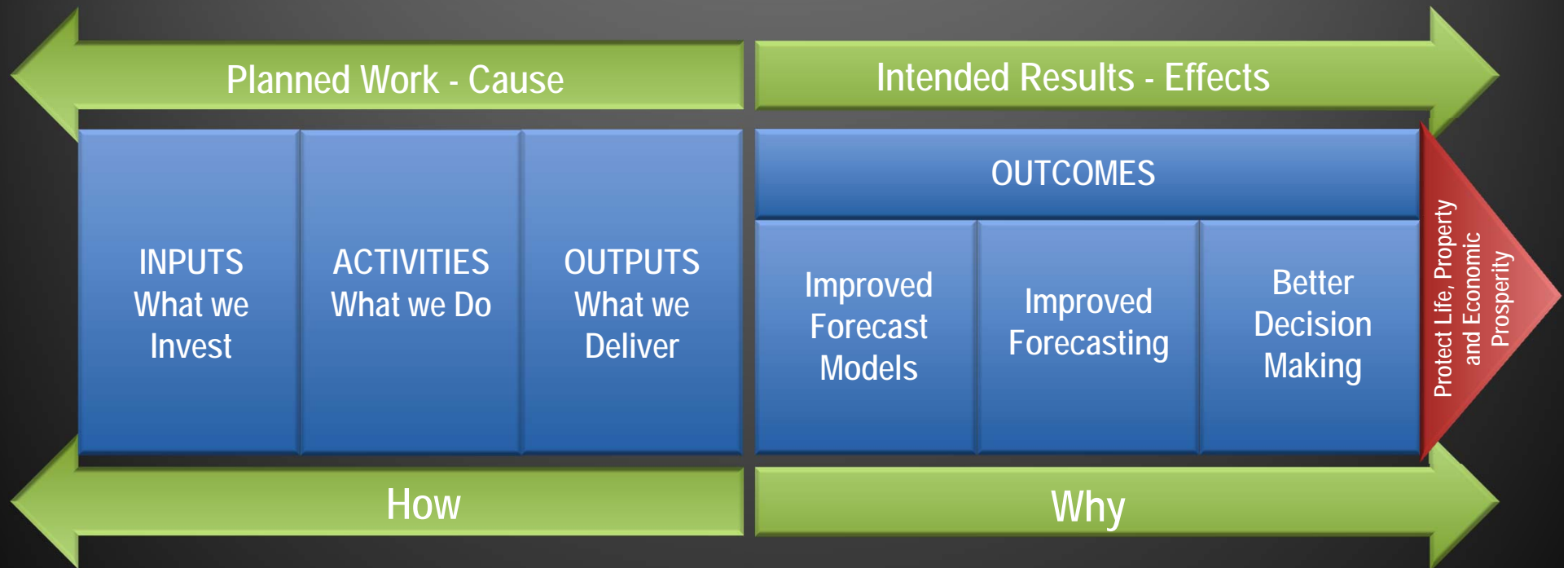
Prepared by: Teclote Research, Inc.

Intended Audience

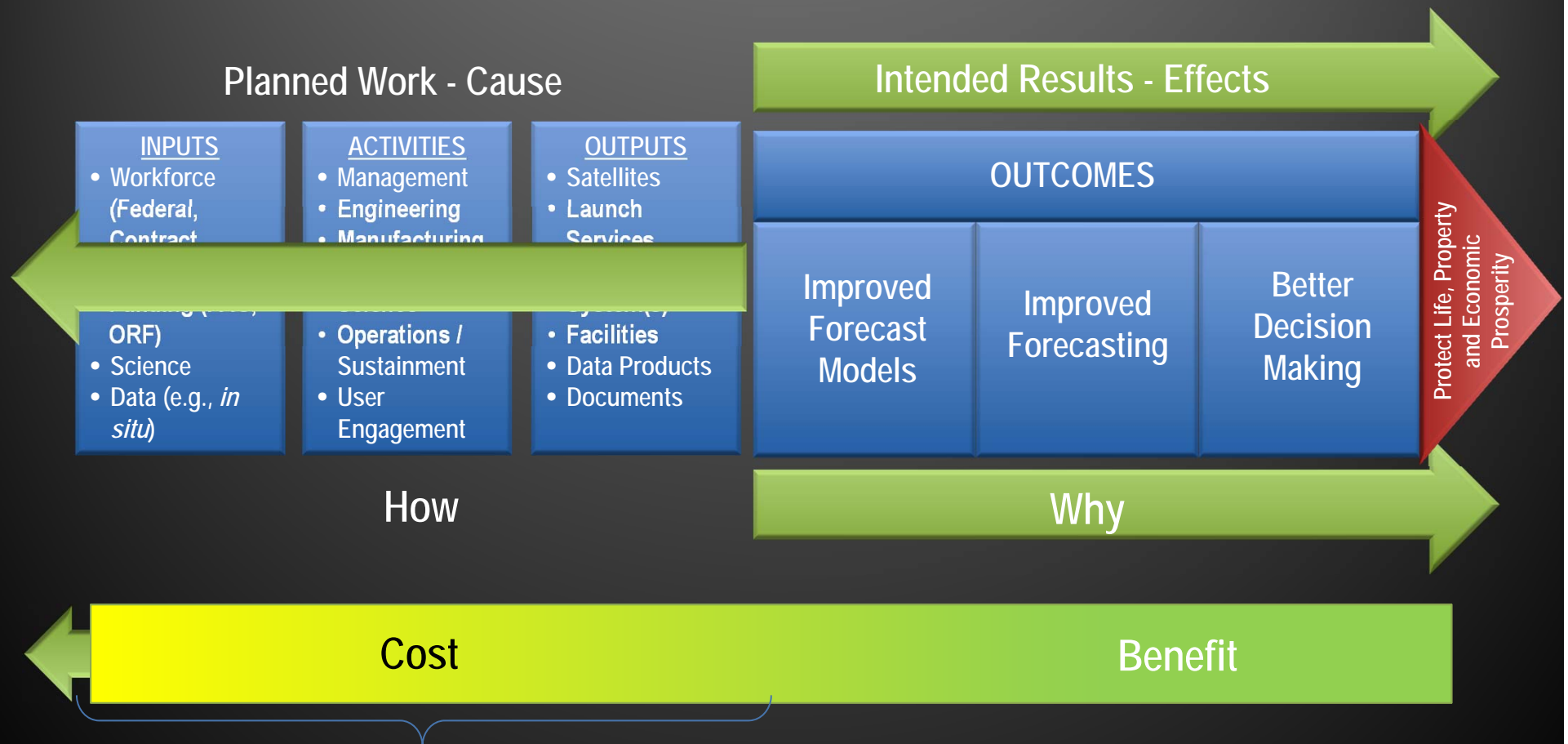
- The U.S. Congress; the Office of Management and Budget; the Department of Commerce; and the National Oceanic and Atmospheric Administration.



JPSS Logic Model



JPSS Logic Model



These costs generally understood



Methodology

Used prior studies and the WMO's (World Meteorological Organization's) OSCAR (Observing Systems Capability Analysis and Review Tool)

A partial list of studies/documents/reports reviewed for this effort include:

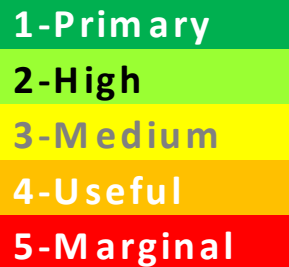
- EUMETSAT's *The case for EPS/Metop Second Generation: Cost Benefit Analysis, Full Report*
- Goldberg, M. D.; "Status of the SUOMI National Polar-orbiting Partnership (NPP) Satellite Instruments"
- Hertzfeld, H. R., et. al.; *Weather Satellites and the Economic Value of Forecasts: Evidence from the Electric Power Industry*
- Lazo, J. K., et. al.; *300 Billion Served – Sources, Perceptions, Uses, and Values of Weather Forecasts*
- Lazo, J.K., et. al.; *U.S. Economic Sensitivity to Weather Variability*
- Riishojgaard, L. P.; *Review of Specific Regional Activities Related to Observing System Design, Regional Association IV*
- Wolfe, K. E.; *Joint Polar Satellite System (JPSS) Preliminary Benefits Study*



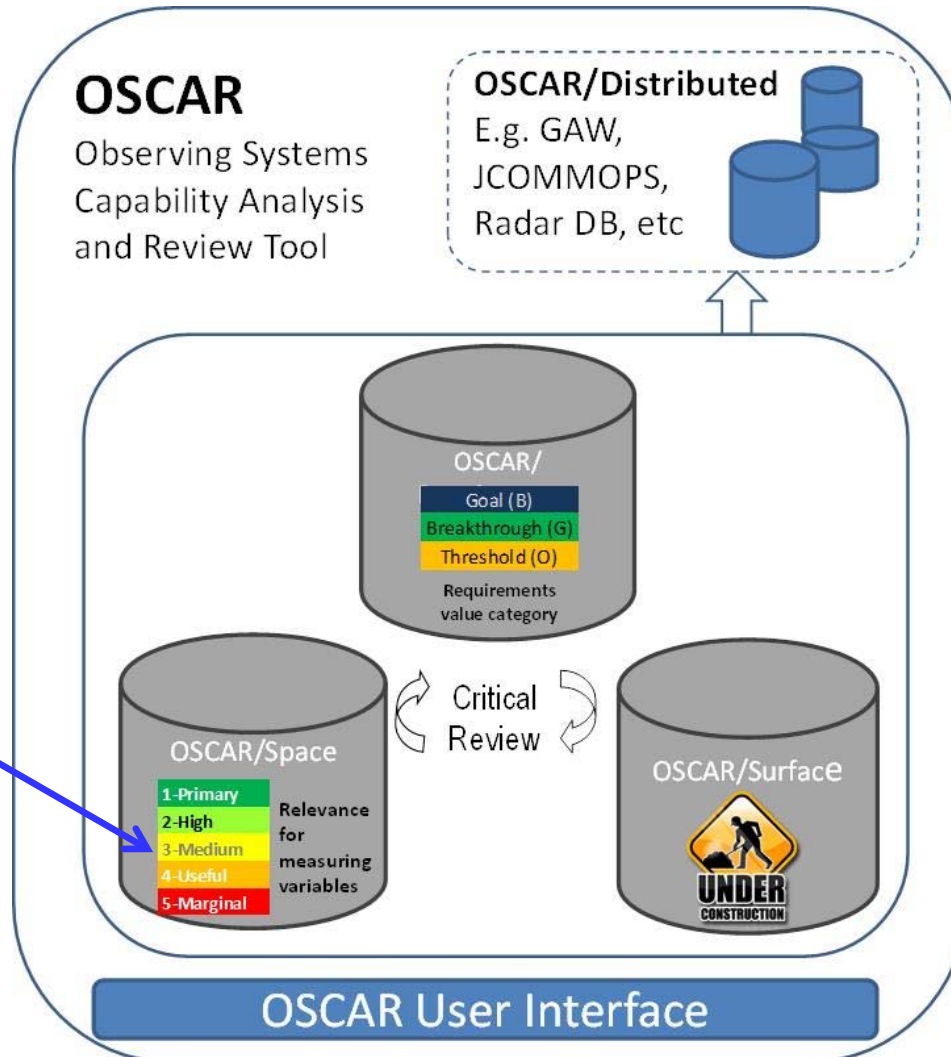
Methodology (cont.)

WMO's OSCAR

Used OSCAR's "Relevance for measuring variables" in the analysis



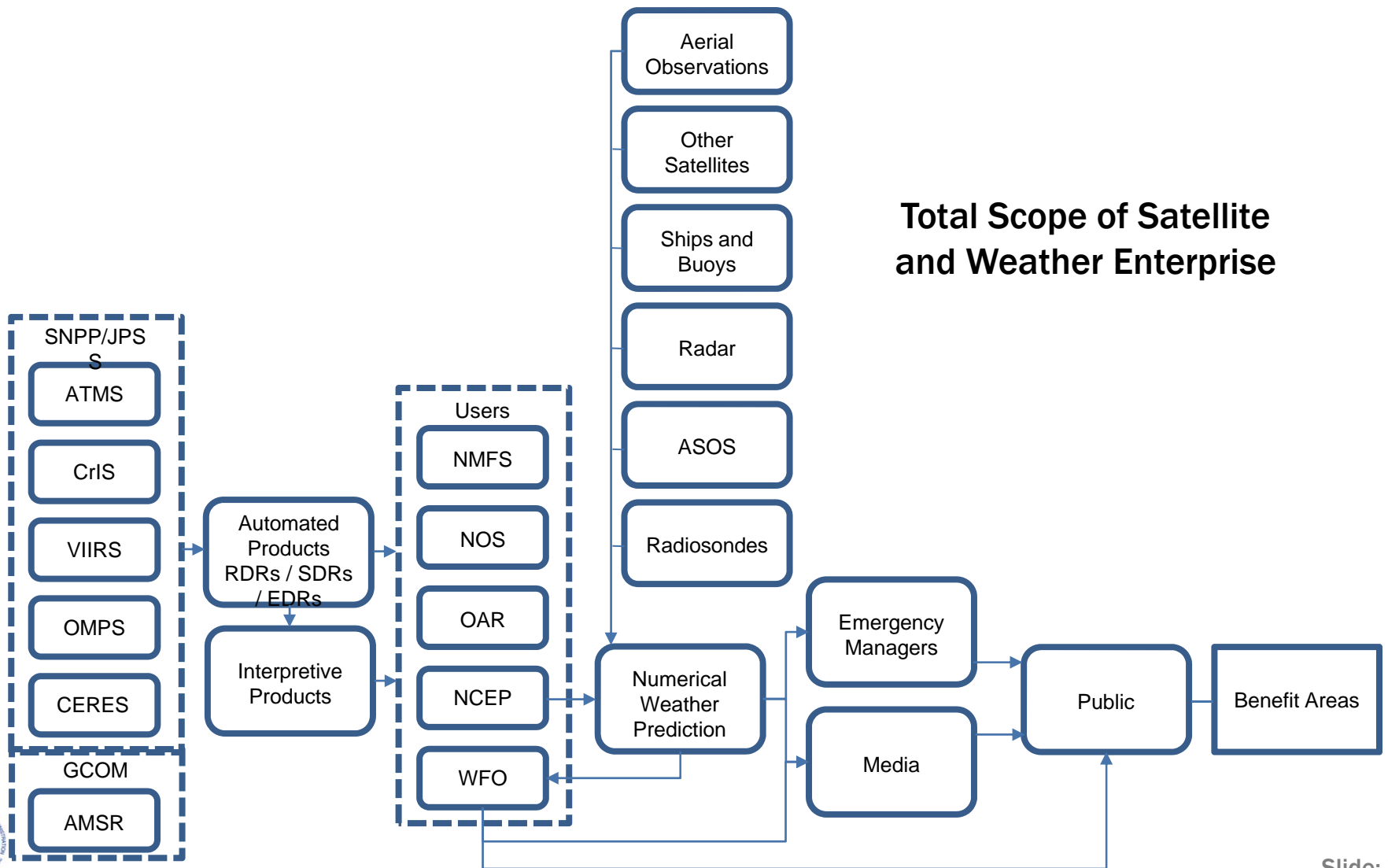
Relevance for measuring variables



Adapted from: Charpentier, Etienne; WIGOS Operational Information Resource (WIR), Slide 6



Methodology (cont.)





Challenges

- Potential benefits from JPSS are broad in scope
- Past economic analysis has focused on how large the benefit area is that satellites support; however, it has been difficult to quantify how satellites impact that economy
- Missing key links in the value chain from satellite observations to ultimate benefits to the public and the economy
- It is difficult to estimate the value of weather information to the general public
- Proper CBAs are time-consuming and costly; especially as you move down the value chain described above



Lessons Learned

- 1. Studies' assumptions must be fully analyzed & justified to yield defensible conclusions & recommendations.**
- 2. The weather intelligence & weather derivatives industries use of current meteorological data with significant impacts for the U.S. economy**
- 3. WMO's OSCAR database is an excellent source and repository of meteorological information and data**
- 4. Need information on how decision makers and emergency managers use forecast information to quantify economic impact of forecast improvements derived from JPSS.**



Acknowledgement

Jérôme Lafeuille, WMO Chief, Space-based Observing System

