



# Veracity Engineering

## Managing Stakeholder Involvement

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Operations Integration

January 2017

# Background

- **20+ Years Operational ATC Experience;**
  - **military/FAA in Tower and TRACON environments**
- **13+ Years Implementing Software and ATC Automation Systems**
- **Received PMP Certification in 2003**
- **Program Manager:**
  - **Traffic Management Advisor (TMA); a \$500M software development program that enabled 1<sup>st</sup> nationwide time-based metering capability**
  - **ATO En Route Operations Integration (ERAM)**
  - **AJV**
    - **Lead 1<sup>st</sup> ever NextGen Capabilities Ops Integration Analysis**
    - **UAS Integration Ops Requirements Development**
    - **Future TFM Ops Requirements Development**

# Discussion Today



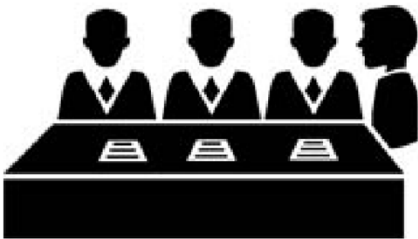
**Stakeholder  
Identification**



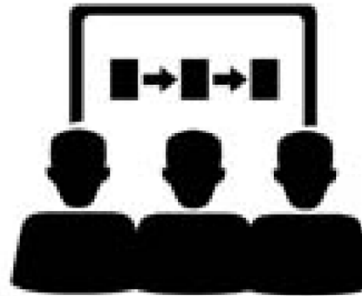
**Analysing  
Stakeholders  
and Interests**



**Pay Me Now,  
Or Pay Me Later...  
a V&V Key to Success**



**Who are They?  
Understanding Stakeholders**



**When and How to Identify &  
Analyze Stakeholders?**

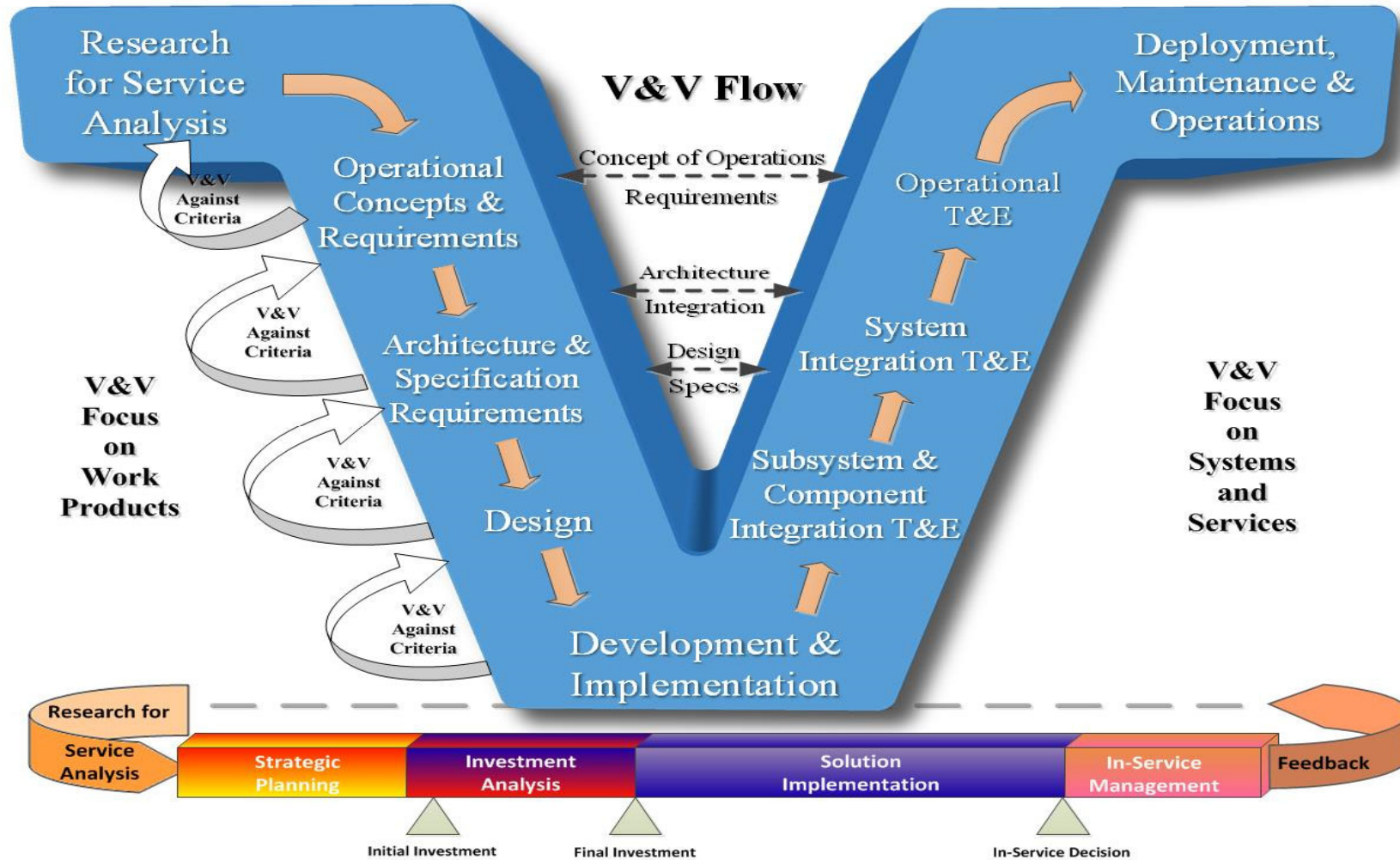


**Prioritization**

# Why... Stakeholder Involvement?

- National Airspace System (NAS) consists of **large, complex, distributed systems, or systems-of-systems (SoS)**, including *technologies, people, and enabling processes and procedures* to deliver air traffic services.
- **Modernization of these SoS** requires more *Verification and Validation (V&V)* of NAS system changes against NextGen concepts.
- Stakeholder involvement is critical throughout NAS modernization.

# V&V FLOW



FAA "V" model

# STAKEHOLDERS IDENTIFICATION



## Stakeholder Identification

*You have gathered your requirements  
from the customer who is paying you.  
Right?*

Stakeholders are the people, group or institutions that can or can be affected by your project in a positive or negative way.

### ***Good Stakeholder Identification:***

- Enables you to identify most requirements from the start
- Lessens number of requirements arising at a later stage
- Lesser re-work and more time and money saved **...(pay me now, or pay me later)**

# ANALYZING STAKEHOLDERS & INTERESTS

## *Why Identify and Analyze Stakeholders and Interests?*

- More Ideas
- Varied Perspectives from All Sectors
- Gains Buy-In and Support
- Improves Situational Awareness
- Strengthens your Position
- Increases the Credibility
- Increases Chances for the Success

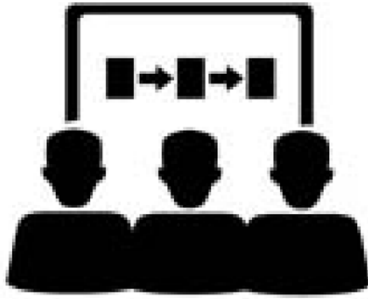


**Analysing  
Stakeholders  
and Interests**

## *What do we mean by Stakeholder and Their Interests?*

- Those **affected by or have an effect** on an effort (internal/external).
- Primary stakeholders= people/groups **directly affected** (positively/negatively).
- Secondary stakeholders= people/ groups **indirectly affected** (positively/negatively).
- Key stakeholders= belong to **Primary or Secondary Groups**, **affect effort** (positively or negatively), and **important personnel** within organization, agency, or institution

# WHEN TO IDENTIFY STAKEHOLDERS



## When and How to Identify & Analyze Stakeholders?

***Identifying stakeholders and their interests should be among the first, if not the very first.***

- Early Identification of Interests
- Transparency among All Stakeholders
- Good Communications Strategy and Plan

## ***Identification & Participation***

- Ensure Key Stakeholders are **Involved from Day 1** (Planning to Implementation).
- Key Stakeholders = **Invaluable SMEs**
- They're **Your Environmental Guide** – Helps navigate and help avoid mistakes in requirements and/or approach.
- Provides **Forum to Raise Concerns**

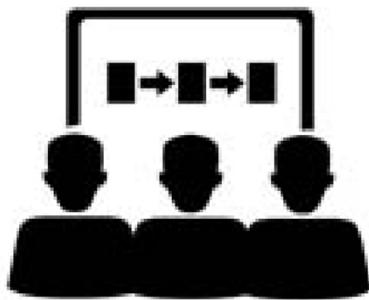
## ***Re-Assess Throughout***

For example, changes in labor contracts, rules & regulations, organizational policies, procedures, etc. can affect the effort and/or stakeholders.

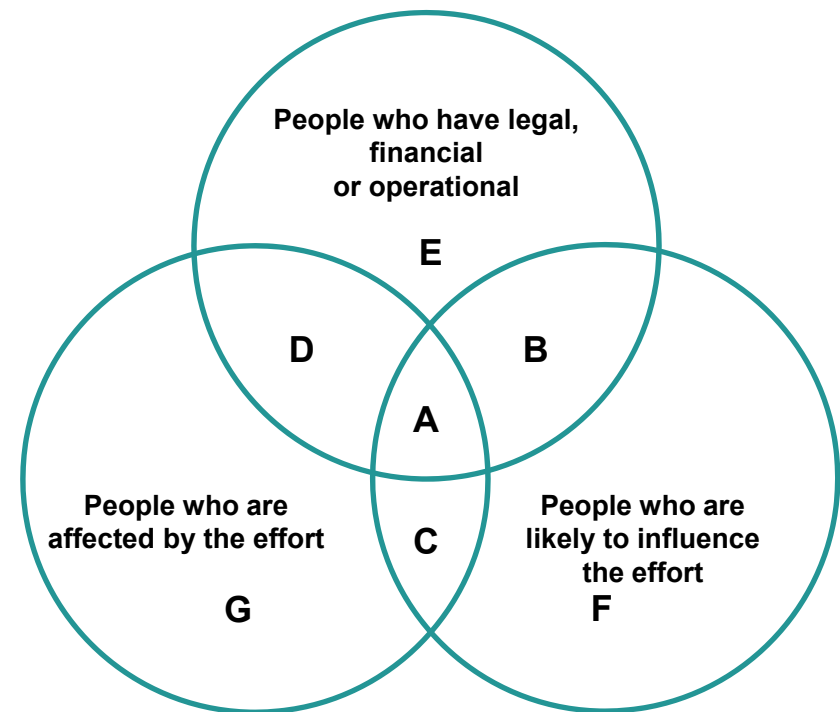
# HOW TO IDENTIFY AND ANALYZE STAKEHOLDERS AND THEIR INTERESTS?

## ***Approach to Identify & Analyze:***

- **Brainstorm:** List all Names of Interest Groups or Parties (i.e. Organizations, Authorities, Individuals)
- **Group the Parties:** (Based on Type)
- **Outline Interests and Concerns** for Each Group:
  - Characteristics and Structure
  - Successes and Concerns
  - Strengths and Weaknesses
  - Needs, Wants, Desires
  - Ownership & Attitudes



**When and How to Identify & Analyze Stakeholders?**



**Prioritize**

# UNDERSTANDING YOUR STAKEHOLDERS

## **Key Questions to Understand Stakeholders:**

*(If you don't know... ask your audience.)*



**Who are They?**

**Understanding Stakeholders**

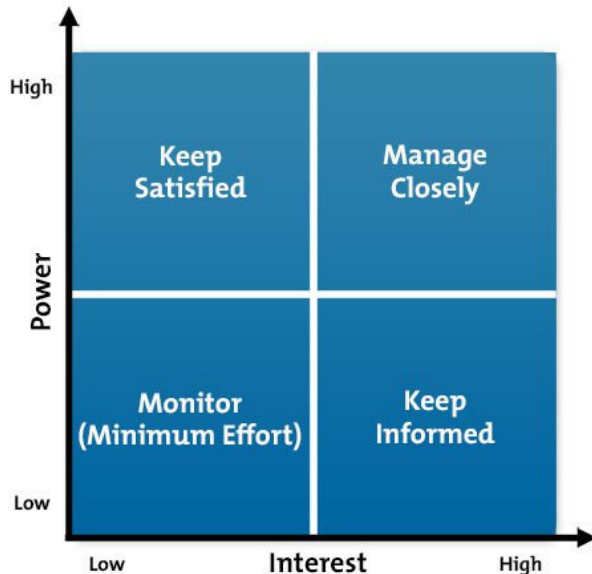
- What motivates them most of all?
- What information do they want from you?
- What is the best way to communicate your message?
- What is their current opinion of your work? Based on good information?
- If they are not likely to be positive, what will win them over to support your project? How will you manage their opposition?
- What financial or emotional interest do they have in the outcome of your work? Is it positive or negative?
- Who influences their opinions, and who influences their opinion of you? Do some of these influencers therefore become important stakeholders in their own right?
- Who else might be influenced by their opinions? Do these people become stakeholders in their own right?

A very good way of answering these questions is to talk to your stakeholders directly – people are often quite open about their views, and asking people's opinions is often the first step in building a successful relationship with them.

# THE GRID...

## ***Grid Position Necessary Actions:***

- **High power, interested people:** Fully engage; make greatest efforts to satisfy
- **High power, less interested people:** Medium level of effort; keep them satisfied.
- **Low power, interested people:** Keep adequately informed, ensure no major issues arise.
- **Low power, less interested people:** Monitor; no excessive communication.



Power/Interest Grid for Stakeholder Prioritization



**Prioritization**

# A V&V KEY TO SUCCESS...

*Pay me now, or pay me later...*



**Pay Me Now,  
Or Pay Me Later...  
a V&V Key to Success**

**Verification (of V&V) should include analysis of project's stakeholder involvement throughout lifecycle:**

Did key stakeholders?

- Participate in the analysis of the legacy operational environment?
- Assist validation and documentation of operational assumptions?
- Assist analysis of shortfalls and gaps?
- Validate needs?
- Participate in researching potential solutions?
- Participate in the development of operational and functional requirements?
- Participate in the implementation planning?
- Participate in development and implementation communication strategies and plan?
- Participate in testing?
- Participate in post-implementation analysis?

# CONCLUSION

*“As systems become more interdependent, as stakeholder needs change and the scope of services increases, the complexity of the NAS will continue to increase. To keep its hold on this, a culture must be able to maintain a consistent and conscious understanding of the system, services, and stakeholder complexities and efficiently manage complexities while balancing the safe, effective, and efficient operation of the nation’s air space system.”*

**--Shelley J. Yak, author of “Complexity Consciousness,”  
Director, William J. Hughes Technical Center, FAA.**



## Questions?