



**Paul Scarbrough**

Getting Big Things  
Done Through \_\_\_\_\_

**VALUE  
MANAGEMENT  
DE LA VALEUR**

Réaliser de grandes  
choses avec le \_\_\_\_\_

VE: the essential business tool for big projects





## VE: the essential business tool for big projects

# Agenda



- Project controls help predict and manage-but what?
- We use accounting tools, project management techniques, etc.
- BUT controlling outcomes relies on a different control approach. VE can integrate with all other business tools to control project outcomes.



# Agenda



- I describe how VE works with other business tools for big projects and why VE adds value to them.
- Then, I discuss some of the “big project” issues described by [Bent Flyvbjerg](#)



# Goals of projects:



- On time
- On budget
- With desired benefits



# Business Tools



## Activity Based

### Costing/Management

ABC/M focuses on the management of activities as a route to improving organization performance and the value received by its customers

More emphasis on enhancing program value by identifying causes of costs

Provides information for comparing activities and ongoing monitoring of program costs

Applicable to programs and services

## Value Engineering

VE uses creative and analytical techniques to identify alternative ways to achieve objectives or outcomes

More emphasis on value for money by balancing needs/benefits with resources

A structured method to agree on required needs and a range of solutions

Applicable to processes, products, projects, services

## Lean Six Sigma

LSS aims to maximize customer value by minimizing waste and reducing defects

More emphasis on optimizing an existing business or transactional process

It is a business system that assists in the identification and steady elimination of waste

Applicable to repeatable processes

## Design Thinking

Design Thinking aims to reframe problems in human-centric ways and focus design on users

More emphasis on defining needs

It is a 5 stage process used in product development

Applicable to services and products



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VE uses creative and analytical techniques to identify alternative ways to achieve objectives or outcomes

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A structured method to agree on required needs and a range of solutions

Applicable to processes, products, projects, services

# Theory



VE is the only method that has a theory to guide it.

- Lean has no theory that defines waste
- ABC/M has no theory to define “activity”
- Design Thinking has no theory to define its elements

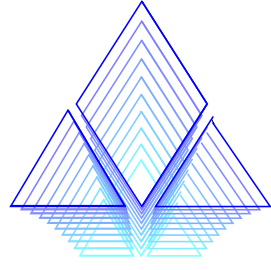
VE can supply the theory for most other tools. For example, in Japan VE is the *necessary* core of Lean.



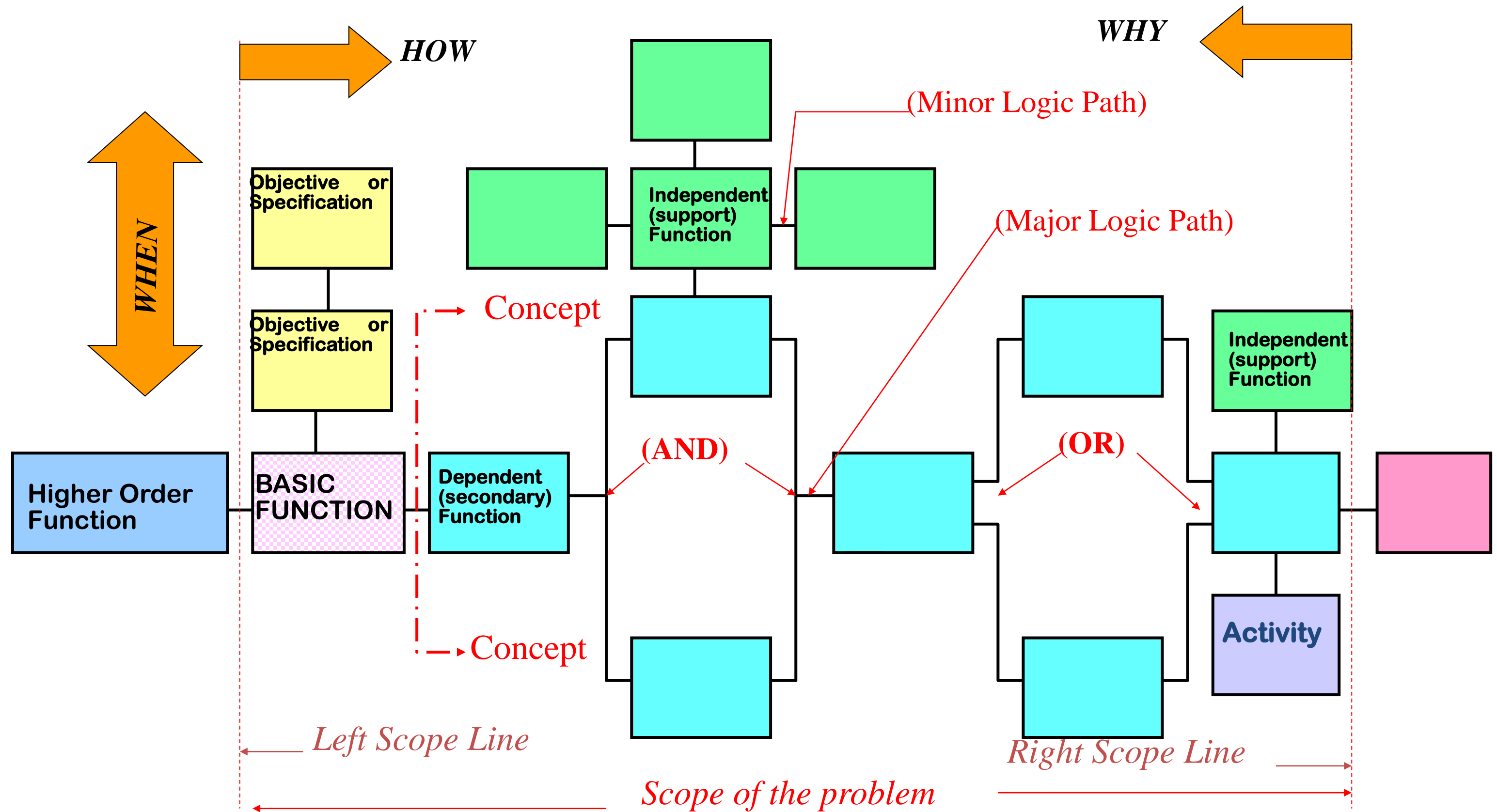
For example: What is Waste?

This seems easy in early analysis because many things are obvious to the participants, however after a few years you get to a point where you need to challenge your way of thinking. Some well established practices are waste but so “normal” that they would not be even questioned.

VE can provide a very clear indicator that something may be waste: It is something that does not meet a basic function.



# Function Analysis System Techniques



In Project management there is no theory to help you define a good node in a process.

So, “new” nodes are added during the project as the planners realize that they missed a step. The node definitions have no connection that lets you understand how they relate.

The FAST diagram’s use of the Core Concept of Basic Function with the connection concepts of How and Why are a theoretical way to define nodes

## How does Japan use VM/E?

Japanese companies do not use Lean as we understand it. They just want *all employees* to use VE and Quality Management to solve problems on the floor, small problems and large problems.

They think that what they are doing is just to implement what they learned from Deming about quality (and others) and from Larry Miles about VE.

# What does Bent say?



## Big Project Issues *per* Bent Flyvberg:

- Think Slow; Act Fast--The work plan
- Think Right to Left--a simple version of FAST
- Experience is key—Facilitator focus on Basic Function
- You Think Your Project is Unique--modularity is the link to Lean Production



# What does Bent say?



Bent: Think Slow; Act Fast

VE: The work plan

VE Facilitator-led search for Basic Functions slows down the process in specific ways directly related to the project itself, not just going slow *per se*.



# What does Bent say?



- Bent: Think Right to Left  
Make sure you have a good goal, and focus on the goal
- VE: FAST is deeper and more sophisticated since:
  - it is left-to-right-to-right-to-left and
  - is based on functions not activities, so it keeps focus on goals not activities.



# What does Bent say?



- Bent: Experience is key.
- VE: Diverse broad group membership a historical mandate. Group experience more important than individual.



# What does Bent say?



- Bent: You Think Your Project is Unique
- VE: Function-based modularity is the link to Lean Production



Value Engineering is a *complementary* tool to design processes that focusses entirely on harnessing diverse inputs and answers most, or perhaps all, of the issues raised by Bent Flyvbjerg

**Toyota – Never thinks about Lean.**

**They just use VE and Quality Tools to do work.**

# At Toyota they encourage even efforts with no measureable financial return. Why?

- Improvements stack and they believe a benefit will happen eventually from later improvements.
- Doing small improvements develops essential skills needed for large projects. So, all projects have a training benefit—even if they fail
- They also allow risky projects. If the failure rate of projects is too low they are concerned that the projects are too cautious.

# Section Header-Titre



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What is Function Analysis

[www.valueanalysis.ca/functionanalysis.php](http://www.valueanalysis.ca/functionanalysis.php)

Webinars - [www.valueanalysis.ca/publications/value voices webinars](http://www.valueanalysis.ca/publications/value%20voices%20webinars)

[From organizational restructuring to product optimization, Function Analysis does it all!](#)

[\*\*Value Management to Meet Client Goals and Objectives from Day One of Design\*\*](#)

