



CONSTRUCTION AND ENGINEERING LEADERSHIP CONFERENCE

EFFECTIVENESS OF VA/VE ON CONSTRUCTION PROJECTS

Francine Constantineau, Eng. CVS

BASICS

OPTIMIZATION
of the satisfaction of needs ratio
cost

**Involvement of a
MULTIDISCIPLINARY TEAM**

Use of a standard JOB PLAN

VE GOAL

Enhance quality

Reduce cost

Control cost objective

VE TEAM

- ➡ **External experts**
- ➡ **Project team experts**
- ➡ **Mix of external and project team experts**

JOB PLAN

- 1. Orientation**
- 2. Information**
- 3. Function, cost and value analysis**
- 4. Idea generation**
- 5. Evaluation**
- 6. Recommendation**
- 7. Implementation**



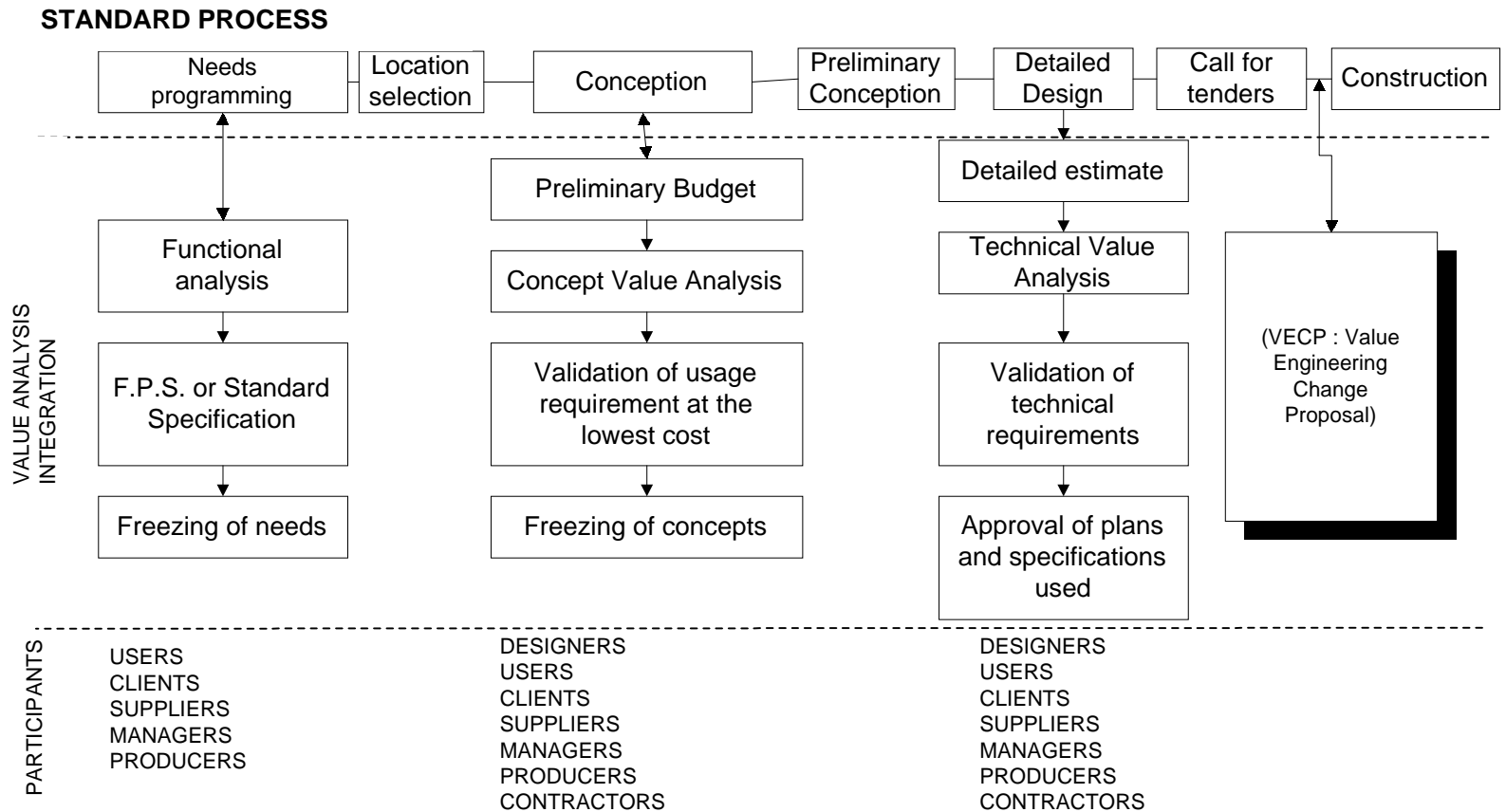
APPROPRIATE TIME INTERVENTION

AS SOON AS POSSIBLE
in the product or process life cycle
in order to avoid costly positionings
or implementation changes
that have no significant bearing on costs

DEPENDING ON THE PROJECT SCOPE
action may be taken
at different steps



INTEGRATION OF VALUE ANALYSIS IN A PROJECT MANAGEMENT PROCESS



EXAMPLE OF APPLICATION

Lapinière waste-water plant

City of Laval, Quebec

\$80 millions

closed budget project

GOAL TO BE MET

Control cost
objective

TEAM

Team project experts

External experts :

- **Engineering**
- **Construction**
- **Operations**

INTEGRATION TO PROJECT MANAGEMENT

- 1) At the start of the project**
- 2) At the preliminary concept stage**
- 3) At the detailed design stage**

RESULTS

Stage 1

- ✓ **Sound understanding of needs**
- ✓ **Sound preparation for the call for tenders**
- ✓ **Cost reduction of 4%**

RESULTS

Stage 2

- ✓ **Validation of the content**
- ✓ **Orientation of the content**

RESULTS

Stage 3

- ✓ Assurance of a sound implementation
- ✓ Cost reduction of 3%

CONCLUSION

Funds made available for additional equipment

On-schedule delivery

Satisfied team

Better project value