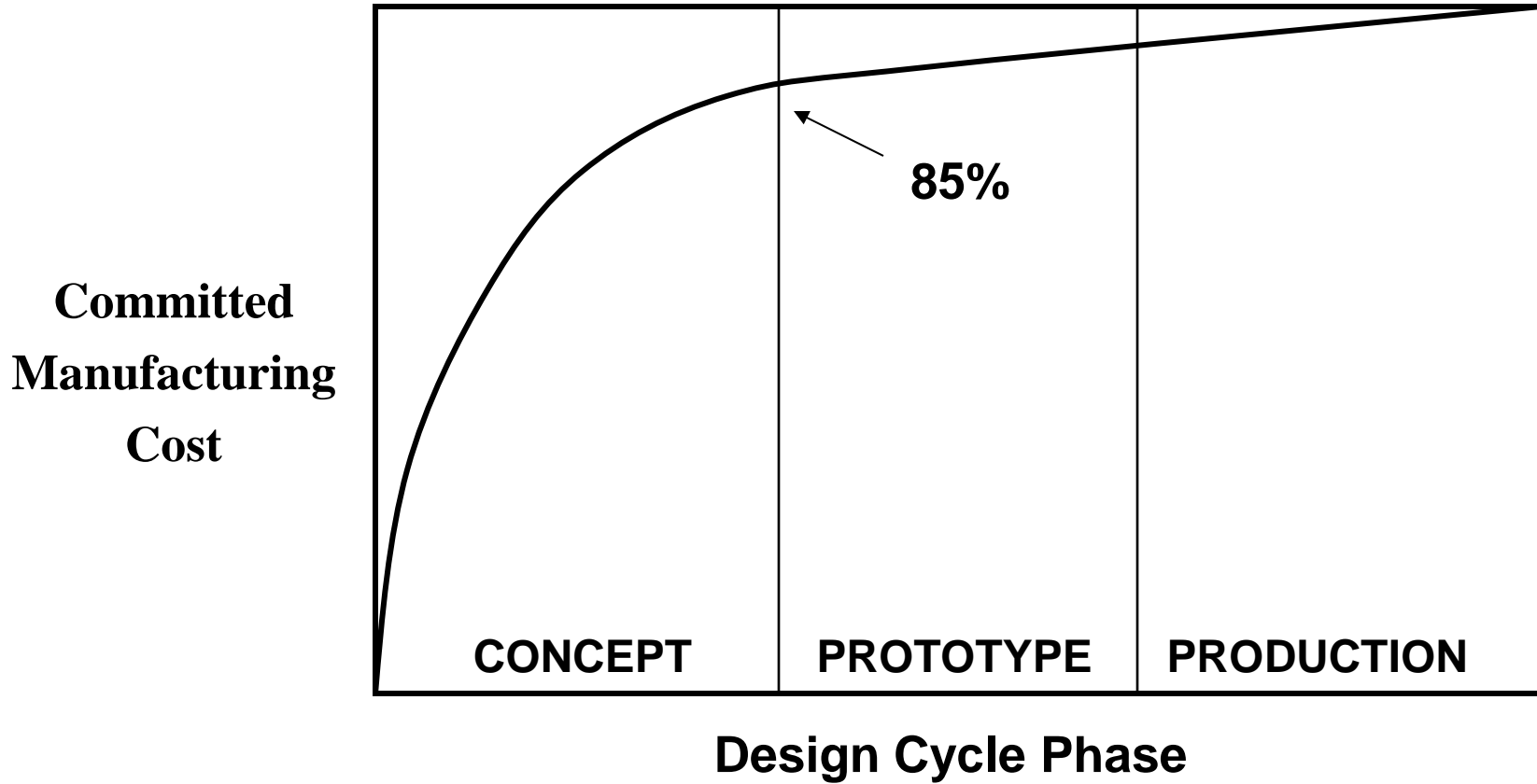
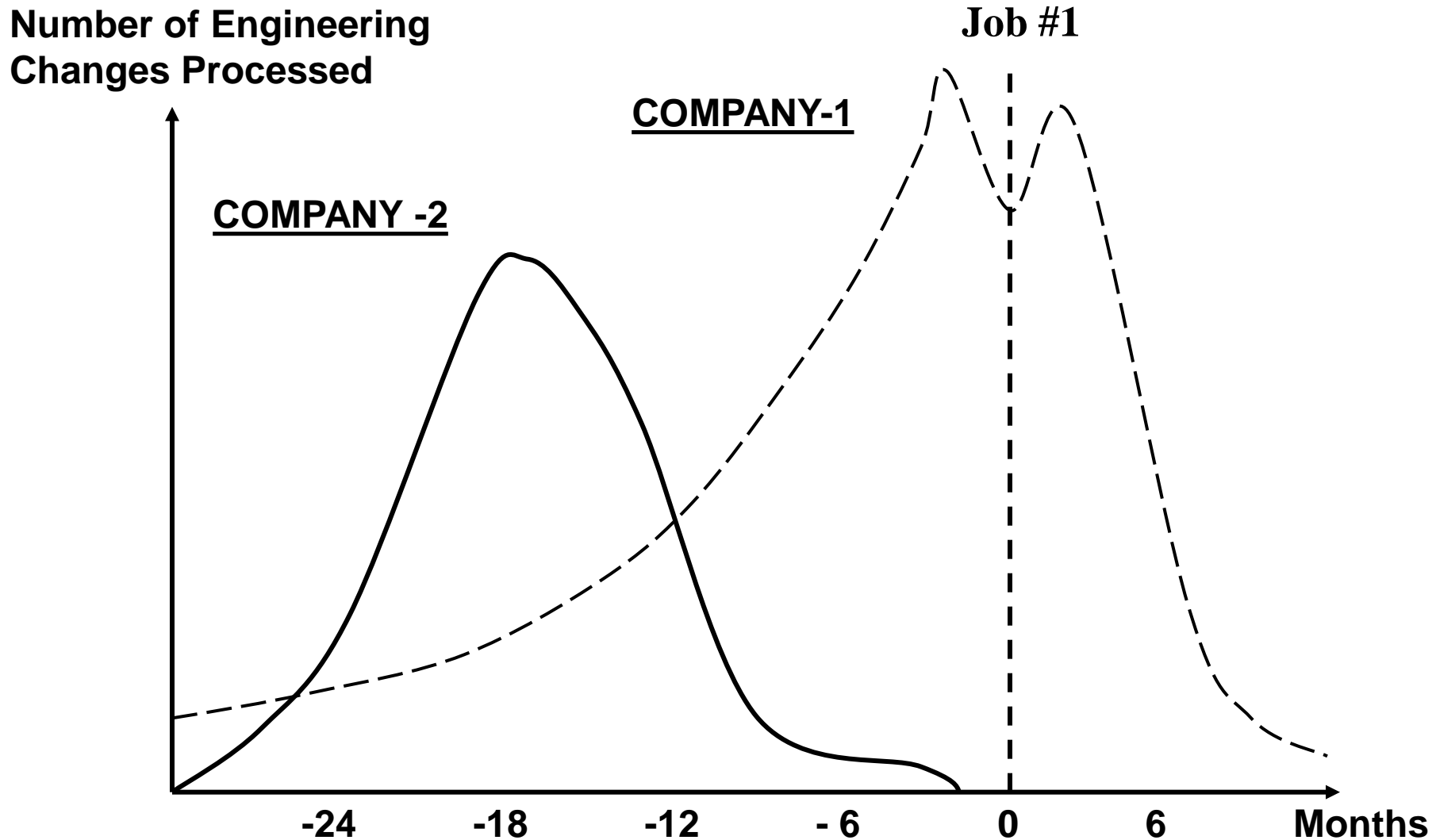


# **The Pugh Method of Creative Concept Evaluation**

# Cost Impact of Decisions

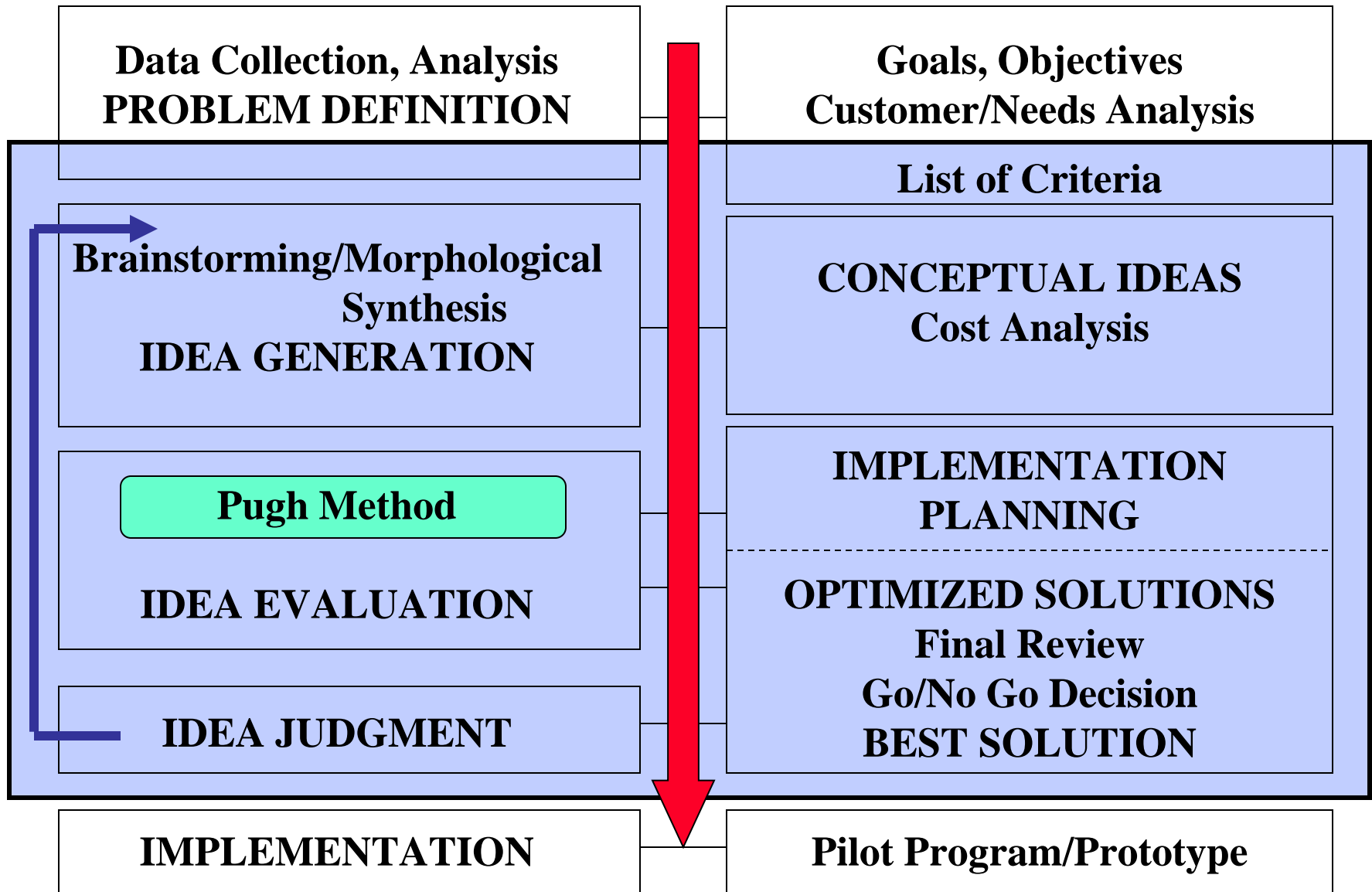


## Comparison of Engineering Changes in Companies (1 and 2) (May thought to in USA and Japan respectively)



## Problem Solving Process

## Related Task



# What is Pugh Method

It is an iterative creative idea or concept evaluation technique that uses criteria derived from the “voice of the customer” in an advantage-disadvantage matrix.

Each concept is evaluated against a datum using a three-way evaluation scheme.

## EVALUATION SCALE

- +** means substantially better
- means clearly worse (or flawed)
- S** means more or less the same

## Building the Pugh Evaluation Matrix

1. Enter the numbered list of criteria in left-hand column.
2. Select a datum (best existing concept); enter next to criteria.
3. Number the new concepts, list sequentially across the top in subsequent columns.
4. Evaluate one concept at a time against the datum, for each criterion.
5. Add up all positives and negatives separately at the bottom.
6. Critically evaluate the results (horizontally and vertically).

		Concepts				
			1	2	3	4
	Criteria	D A T U M				
	Total + Total -					

# **Team Role in the Pugh Method**

- 1. Arbitrary criteria, if present, get revealed during team discussion. Members gain insight into the issue and the criteria get better defined through clearer understanding.**
- 2. The discussion also leads to symbiotic and synergistic creativity between different concepts and idea synthesis, as pitfalls are attacked together.**
- 3. The evolved concepts are better than the primordial ideas as flaws are less prone to be overlooked; late changes are minimised, and fail-safe market winning products are developed.**
- 4. The team arrives at a consensus for the best solution.**

**Table 5   Pugh Matrix Round 2: Kitchen Lighting Concepts**

#	Criteria	5	7	8	9	10	11
1	Adequate sink task light	D A T U M	S	+	—	S	S
2	Countertop lighting (window wall)		+	+	—	S	S
3	Countertop lighting (stove wall)		+	—	—	S	S
4	Ceiling illumination		S	S	+	S	S
5	Low-energy night lighting		S	+	+	S	S
6	Low glare		+	+	+	+	S
7	Flexible (direction, additions, lumens)		+	+	—	S	S
8	Easy bulb replacement		S	S	—	—	S
9	Energy efficient		S	S	—	S	S
10	Easy to clean		S	S	—	S	S
11	Preserves view of ceiling/open space		S	+	+	—	S
12	Allows deletion of B tubes		+	—	+	S	S
13	Matching adjacent room lamp styles		+	+	S	—	+
14	Attractive to future owners		+	+	—	—	S
15	Low labor cost		S	+	+	S	S
16	Low materials cost		—	+	—	+	S
	TOTAL POSITIVES ( + )		6	10	6	2	1
	TOTAL NEGATIVES (—)		2	2	9	4	0



The above can be done with weights

The scale can also be chosen as

-2, -1, 0, 1, 2

as well