



Services Sciences Education an HPL Perspective

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"If we designed cars as well as we design services, then they would have one axle and five wheels."

Behara and Chase(1993)

Contrast between

Creatives



Engineers



Counter example of 2 cultures

Peter Rice - (1935 - 1992)



In 1992 he was awarded the RIBA Gold Medal for Architecture, the second engineer to receive it.

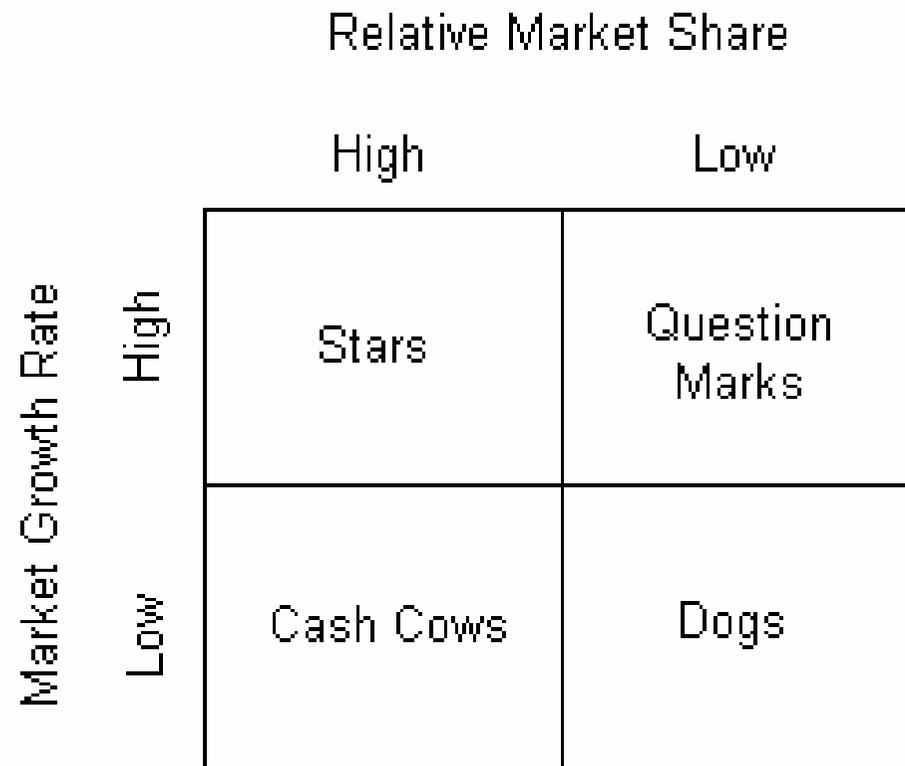
Even difficulty with language

What is a model?

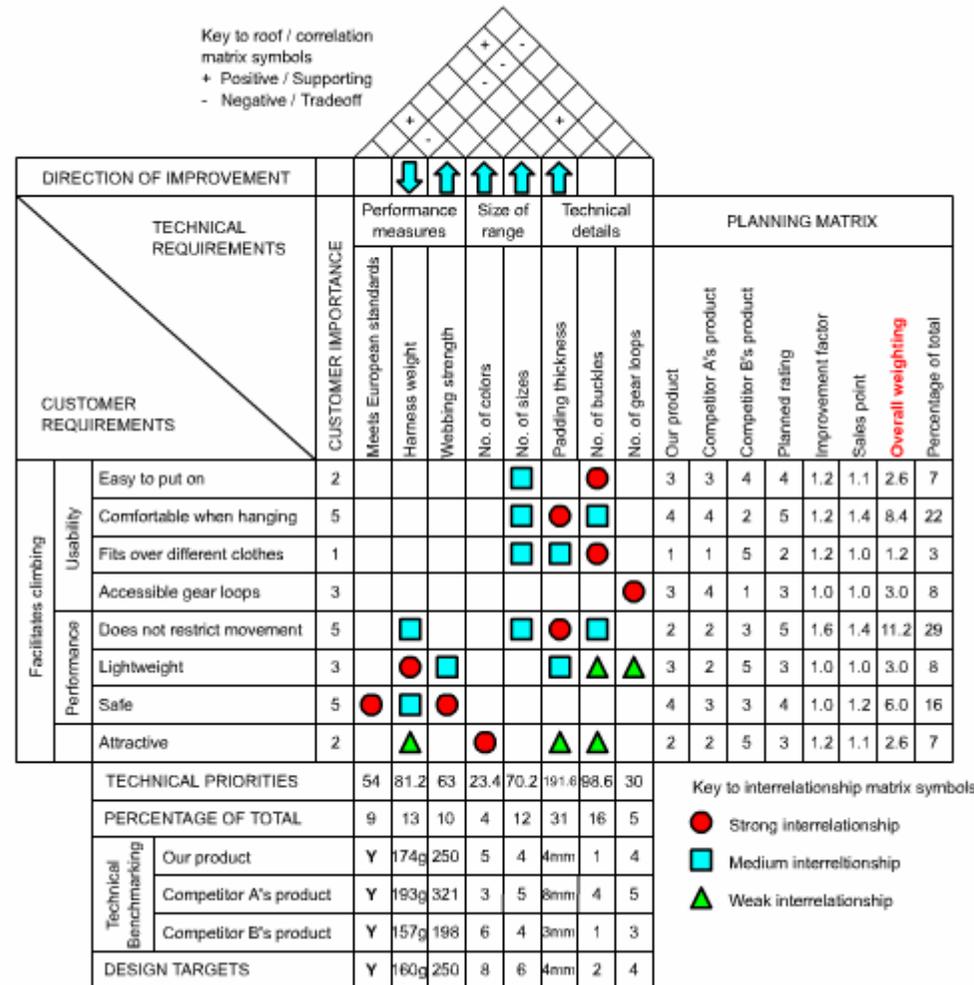
Model?



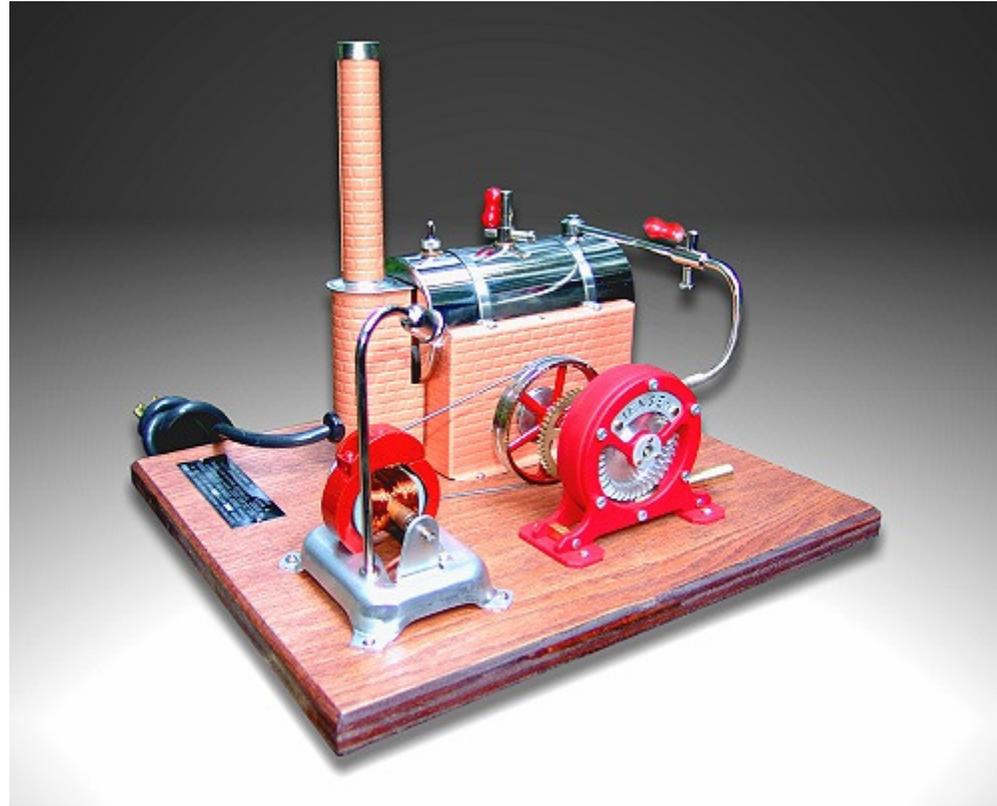
Model?



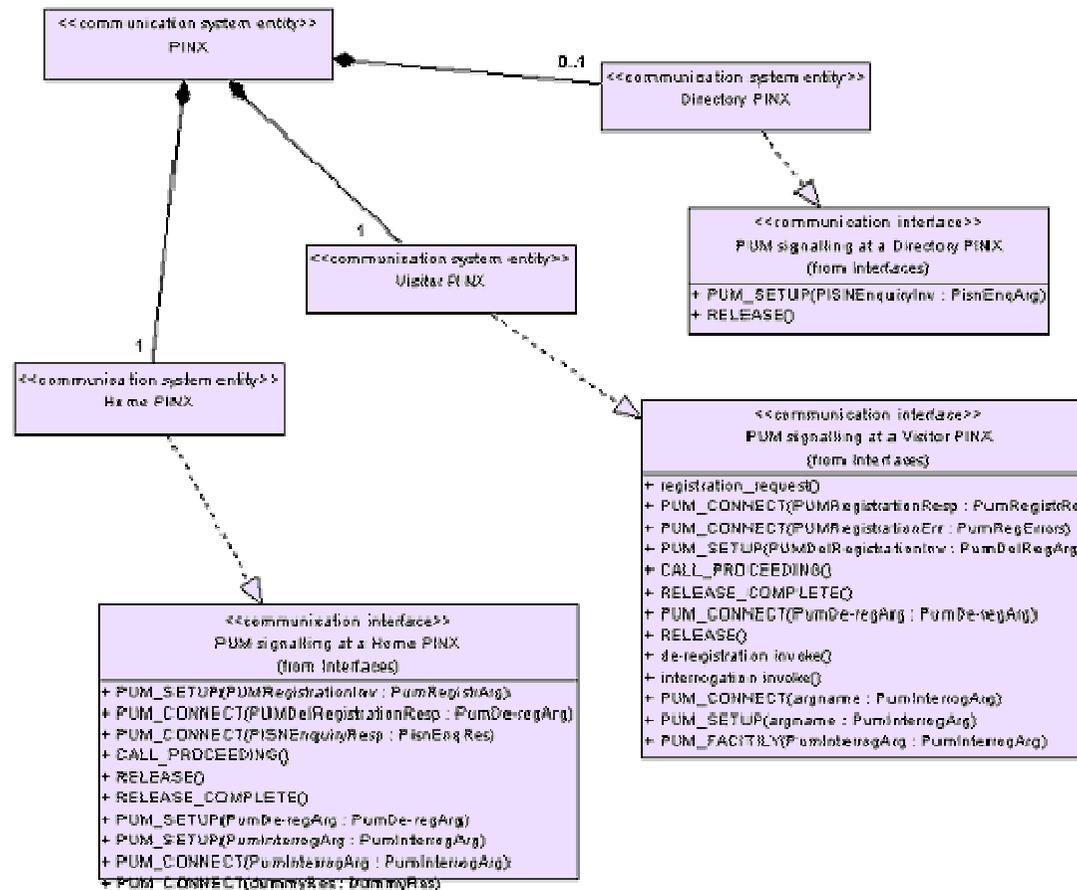
Model?



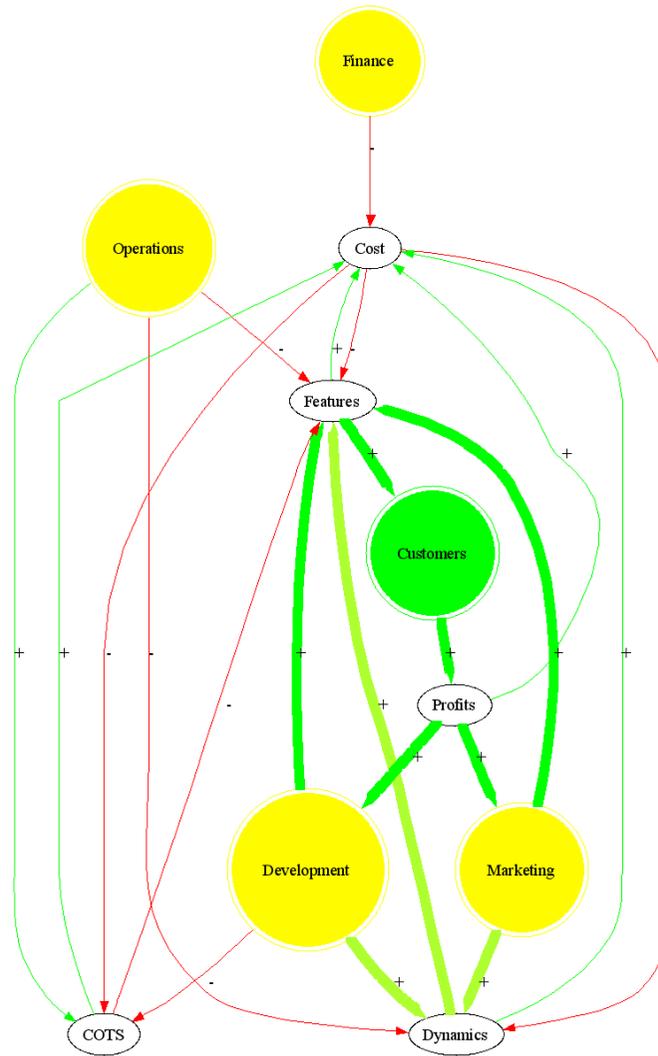
Model?



Model?



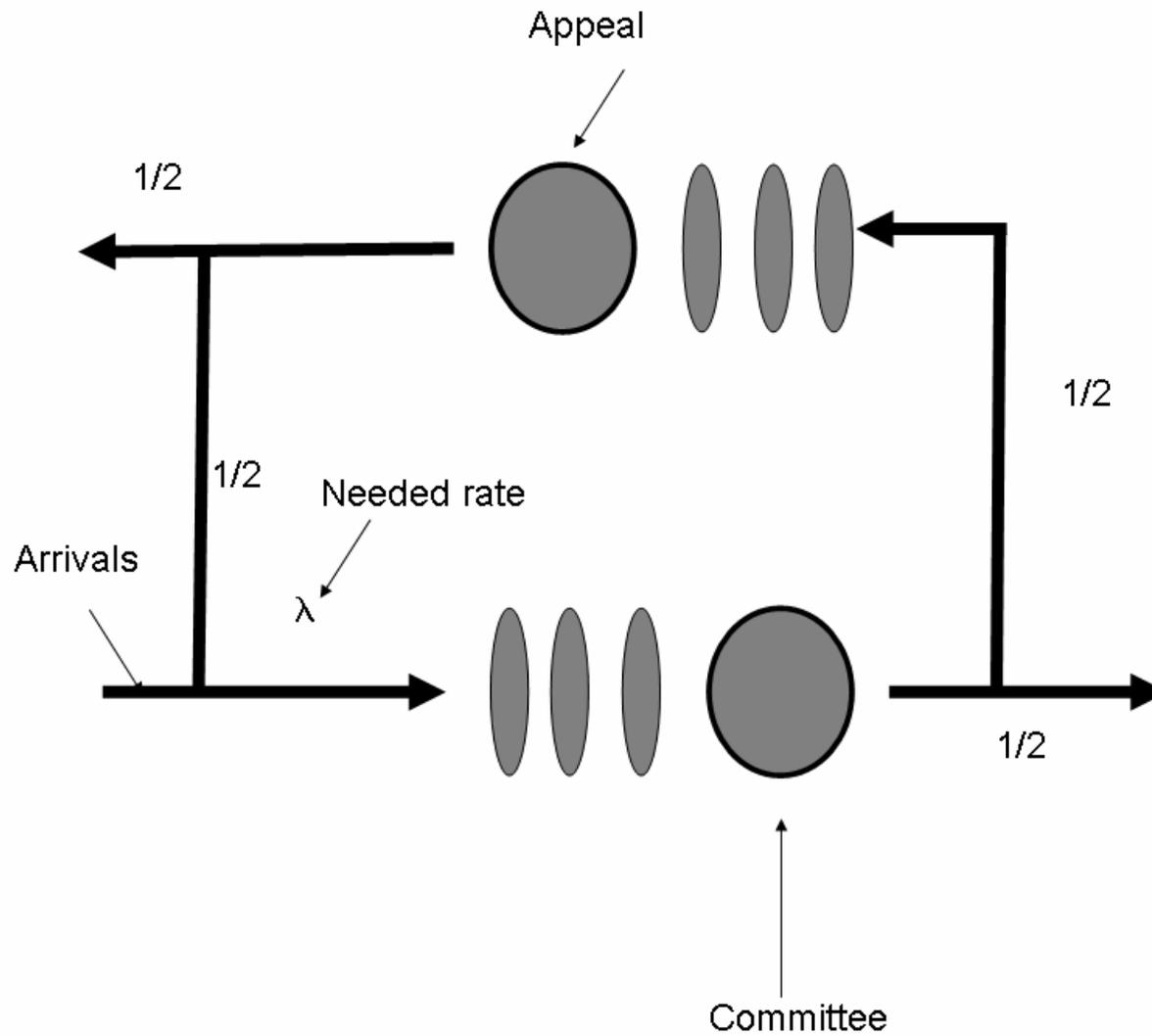
Model?



Model?

$$\frac{f(t)}{1 - F(t)} = p + qF(t)$$

Model?



Model?

```
class sysMove={hold(moveTime);  
  try [startOK==1] then {fix:=fix+1;}  
  etry [] then {hold(fixTime);fix:=fix+1;}
```

```
class EXP={ local var START=0;local var DUR=0;  
  while [exps<toDo]  
  {exps:=exps+1; fix:=0;START:=DEMOS_TIME;  
  do systems {entity(MS,sysMove,0);}  
  try [fix==systems] then  
  {DUR:=DEMOS_TIME-START;TOTDUR:=DUR+TOTDUR;  
  trace("Experiment=%v avDown=%v",exps,TOTDUR/exps); }}
```

"It is of little value to take on system we do not understand and replace it with another we do not understand!"

Paraphrasing Alan Bundy.

What are we modelling for?

Alignment, alignment, alignment

- But to what?
- How is it understood and by whom?
- How will it be measured?
- To whose benefit (stakeholder dissonance)?
- What timescales?
- What do we do when things (inevitably) go wrong?
- Who gets the value when things go right?

"To this end, a contemporary measurement system must have two basic features. First, all data must include a rationale and a purpose; people must know why things are measured and, more important[ly], what they are supposed to do about them. Second, all measurement must be based on a careful analysis of the business, one that links the objectives of the business to the things over which managers and frontline personnel have control. Only then can the recognition of a problematic measure lead to the right actions that will correct it and to improved performance of the business as a whole."

Michael Hammer, Leader to Leader, No. 24 Spring 2002, full article.

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- A search on Taylor Tofts at <http://www.hpl.hp.com/techreports/> gives full picture



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