

Reynolds Number for R&D?

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Most of the work on this project was done by an MPhil student, Sean Morrisroe

Aims

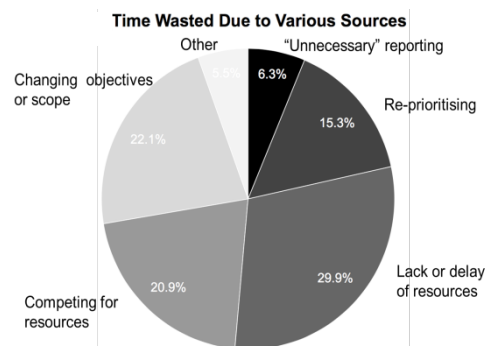
To investigate the sources of delay, inefficiency in multi-project R&D activities.

Particularly to assess the relative importance of estimating and process issues.

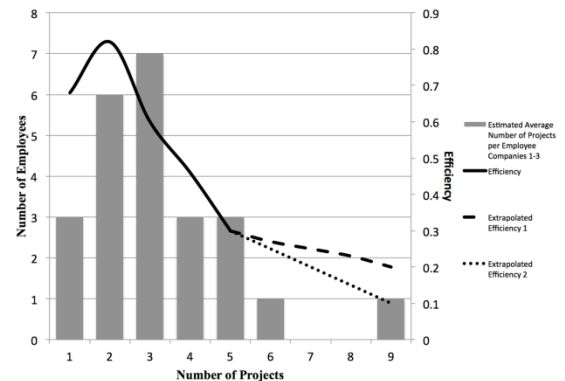
To determine whether there may be a critical load beyond which efficiency drops sharply.

Progress

Interviews in 5 companies showed, surprisingly, that in the opinion of those interviewed the main cause of delay and inefficiency was not estimating errors but process issues:



There was some indication that engineers might be working on more simultaneous projects than is ideal for efficiency



Conclusions

This was an exploratory project. The results indicate that the Reynolds number idea is not worth pursuing. It appears that the most useful approach is to address the process issues indicated in the pie chart.

Possible approaches are to try:

- Scrum/visual management methods
- "Short and fat" rather than "long and thin" projects – i.e. consider doing fewer projects but faster, with more resources

Also, in support of these we suggest

- Members might use a time-sheet study to determine how their R&D engineers actually spend their time
- A student project on how to readily estimate the value of time (cost of delay) in any particular company.

Deliverables

Evaluating uncertainty in R&D development projects, Sean Morrisroe, MPhil dissertation.