PRODUCTION
PLANNING &
CONTROL
THE MANAGEMENT OF OPERATIONS
DECISION SUPPORT AND OPERATIONS MANAGEMENT
STEVE CHILDE
EWG DSS April 2012
Contents

• Operations Management
• DSS
• Links / areas in common
• PPC background, content, direction
• Decision papers in PPC
• The review process
• What to put in and leave out
Operations Management

• “Operations is responsible for supplying the product or service of the organisation. Operations Managers make decisions regarding the operations function and its connection with other functions. The operations managers plan and control the production system and its interfaces within the organisation and with the external environment.” (Schroeder 2000)
Activities in Operations Management

**Understand** strategic objectives

**Develop** an operations strategy
- overall guiding principles, prioritising

**Design** operations, for products and services
- determined by physical form, shape and composition of products services and processes,
- Direct responsibility for product design often belongs elsewhere - engineering or marketing

**Plan and control** operations
- What should Ops resources be doing and when?
- Manage capacity
- Ops is immediate, involves hundreds of “now” decisions

**Improve performance** of operations
- (re)design decisions
Decision Support Topics
(EWG DSS conference topics)

• Decision-Making approaches for Operations Management
• Collaborative Decision-Making in Industries
• Integrated DSS for global manufacturing
• DSS supported by simulation and optimization approaches
• Decision-Making in manufacturing networks
• DSS key issues for Mass Customisation and Co-Innovation in Manufacturing Networks
• Knowledge Management and DSS in Industries
• DSS for lean thinking in process industries
• DSS for Outsourcing, Logistic and Supply Chain Management
• DSS Experiences, Management, and Education
• Methods, Languages and Tools to support Decision Making
Decision Support Topics (re-ordered)

Linked to Operations Management
- Decision-Making approaches for Operations Management
- Collaborative Decision-Making in Industries
- Integrated DSS for global manufacturing
- Decision-Making in manufacturing networks
- DSS key issues for Mass Customisation and Co-Innovation in Manufacturing Networks
- Knowledge Management and DSS in Industries
- DSS for lean thinking in process industries
- DSS for Outsourcing, Logistics and Supply Chain Management.

Not Linked to Operations Management (DSS Theory)
- DSS supported by simulation and optimization approaches
- DSS Experiences, Management, and Education
- Methods, Languages and Tools to support Decision Making
Decision Support Topics (re-worded)

Linked to Operations Management

• How decision making is done in companies, in networks and in different types of industry
• How decision making relates to current topics such as Lean, Supply Chain Management, Outsourcing, Process Industries
• (service industry?)

Not Linked to Operations Management (DSS Theory)

• Theory, technology and history of DSS
Special Issue to be prepared

Collaborative decision-making trends and solutions for industries

Guest Editors
Jorge E Hernandez
Pascale Zaraté
Rita Ribeiro
Andrew C Lyons
Background of PPC

• 12 issues per year, IF: 0.603, ABS: 3*, ARC ERA: A
• PPC grew out of an international working group, IFIP WG5.7 Advances in Production Management Systems. Many of its editorial board are still linked with that group
• We have tried to make the journal a base for the (wider) community, to help researchers to develop their work
• We therefore ask our reviewers to offer supportive comments (even when rejecting)
• We publish a picture and short bio for every author to show we are human and to develop community spirit
• We try to deal with authors in a friendly way, despite using standard letters
Content

• We try to ensure that the research we publish is relevant to the current needs of industry in the area of operations management.

• I use editorials to as a reminder of what research is encouraged.

• We are not tied to a particular academic discipline

• We are not tied to a particular industry
Recently in PPC

- The influence of decision patterns of inventory control on the bullwhip effect based on a simulation game of a production network
  Salima Delhoum, Bernd Scholz-Reiter
  Vol. 20, Iss. 8, 2010

- Combining ad hoc decision-making behaviour with formal planning and scheduling rules: a case study in the synthetic fibre production industry
  Cristóvão Silva
  Vol. 20, Iss. 7, 2009

- Pricing, service level and lot size decisions of a supply chain with risk-averse retailers: implications to practitioners
  Danqin Yang, Tiaojun Xiao, Houcai Shen
  Vol. 20, Iss. 4, 2010

- Changing risk preferences in supply chain inventory decisions
  Kuo-Ting Hung, Sungmin Ryu
  Vol. 19, Iss. 8, 2008

- Cyclical volume planning and fair share mix decisions, delivering a more robust service level
  F. Van den Broecke, E.-H. Aghezzaf, H. Van Landeghem
  Vol. 19, Iss. 7, 2008

- Project agility assessment: an integrated decision analysis approach
  Fereshteh Mafakheri, Fuzhan Nasiri, Mahmoud Mousavi
  Vol. 19, Iss. 6, 2008

- A generalised framework for simulation-based decision support for manufacturing
  Mohammed M. AlDurgham, Mahmoud A. Barghash
  Vol. 19, Iss. 5, 2008

- A decision-making framework for managing maintenance spare parts
  S. Cavalieri, M. Garetti, M. Macchi, R. Pinto
  Vol. 19, Iss. 4, 2008
Forthcoming in PPC

• **Taxonomy of outsourcing decision models**
  Peter Westphal, Amrik S. Sohal

• **Development and analysis of mathematical and simulation models of decision-making tools for remanufacturing**
  Magdalene Andrew-Munot, Raafat N. Ibrahim

• **Outsourcing: decision-making methods and criteria during design and engineering**
  Shishank Shishank, Rob Dekkers

• **A decision support system for a third-party coordinator managing supply chain with demand uncertainty**
  Snehamay Banerjee, Damodar Yadaorao Golhar

• **Decision support tool for lean product and process development**
  Thankachan Thomas Pullan, M. Bhasi, G. Madhu

• **Project risk management using multiple criteria decision-making technique and decision tree analysis: a case study of Indian oil refinery**
  Prasanta Kumar Dey

• **Demand forecasting for production planning decision-making based on the new optimised fuzzy short time-series clustering**
  Bo Li, Junping Li, Wenrong Li, Shamin A. Shirodkar

• **A decision support system for optimising the order fulfilment process**
  Uche Okongwu, Matthieu Lauras, Lionel Dupont, Vérane Humez
Operation of PPC
Editorial structure
Review Process

- On-line submission
- Editor reads and rejects or allocates Co-Editor
- Co-Editor identifies and invites and appoints reviewers
- Reviewers are chased
- Reviewers are chased and more reviewers appointed
- New reviewers are chased
- Enough adequate reviews are received
- Co-Editor takes decision - Reject / Some kind of Revise
- Resubmission by authors
- Accept
Decisions

- **Reject**
  - No good, or not for this journal
- **Reject & Resubmit**
  - Usually due to very poor English
- **Major Revisions**
  - Significant rework and new review
- **Minor Revisions**
  - Some work, new review may not be needed
- **Accept**
  - Paper accepted with no changes at all
Reviewer Guidelines

• “Research papers should be presented in a way that is accessible and useful to practitioners in industry through the use of examples, case studies, guidelines for application, etc,

• “to those producing software and other equipment for production planning and control, and

• “to researchers by making a clear statement of the value of the work and the questions it opens for further research”
Reviewer questions

- Does the motivation for the work originate from industry’s current problems? Is the need for the work demonstrated?
- Does the paper describe and evaluate previous literature on the subject?
- Do the authors show awareness of work that has been published recently in PPC?
- Does the paper describe the use of an appropriate research method?
- Does the paper provide useful new knowledge about the application of the work in practice or to provide directions for future research?
- Do you think the paper has sufficient promise to make revisions worthwhile?
Successive revisions
Successive revisions
Editorial policy and direction

I welcome research and applications papers that:

- Are based in industrial problems
- Provide help for managers / consultants / software producers
- Indicate new problems and help set the future research agenda
On the other hand.....
How to get rejected

These phrases suggest the paper is not based on real life:

• “Let us suppose”
• “Test data”
• “Numerical test”
• “Solve”
• “Experimental study”
• “Numerical example”
• “Computational results”

Just put any of these in the abstract!
Thank you for listening

Any Questions?

Send your papers to mc.manuscriptcentral.com/tppc