



The Context of Operations

- OM impacts Time, Cost, & Quality
 - Elements of TCQ in all cases
 - Queuing Theory
 - Inventory Theory
 - Quality Control
- OM & Strategy
 - Inherently linked with TCQ
 - Product-Process Matrix
 - McD/BK, Fabritek, Boeing, Sega, SWA





Tools

- Queueing Theory
 - Little's Law
- Inventory Control
 - Economic Order Quantity (EOQ)
 - Newsvendor Model
 - Optimal Order Policies (ROP)
- Project Management
 - Critical Path
 - DSM



Tools

- Forecasting
 - Moving Averages & Exponential Smoothing
 - Regression
 - Common Sense
- Statistical Process Control (SPC)
 - X-bar **and** R-bar Charts
- Taguchi Methods
 - Orthogonal Arrays

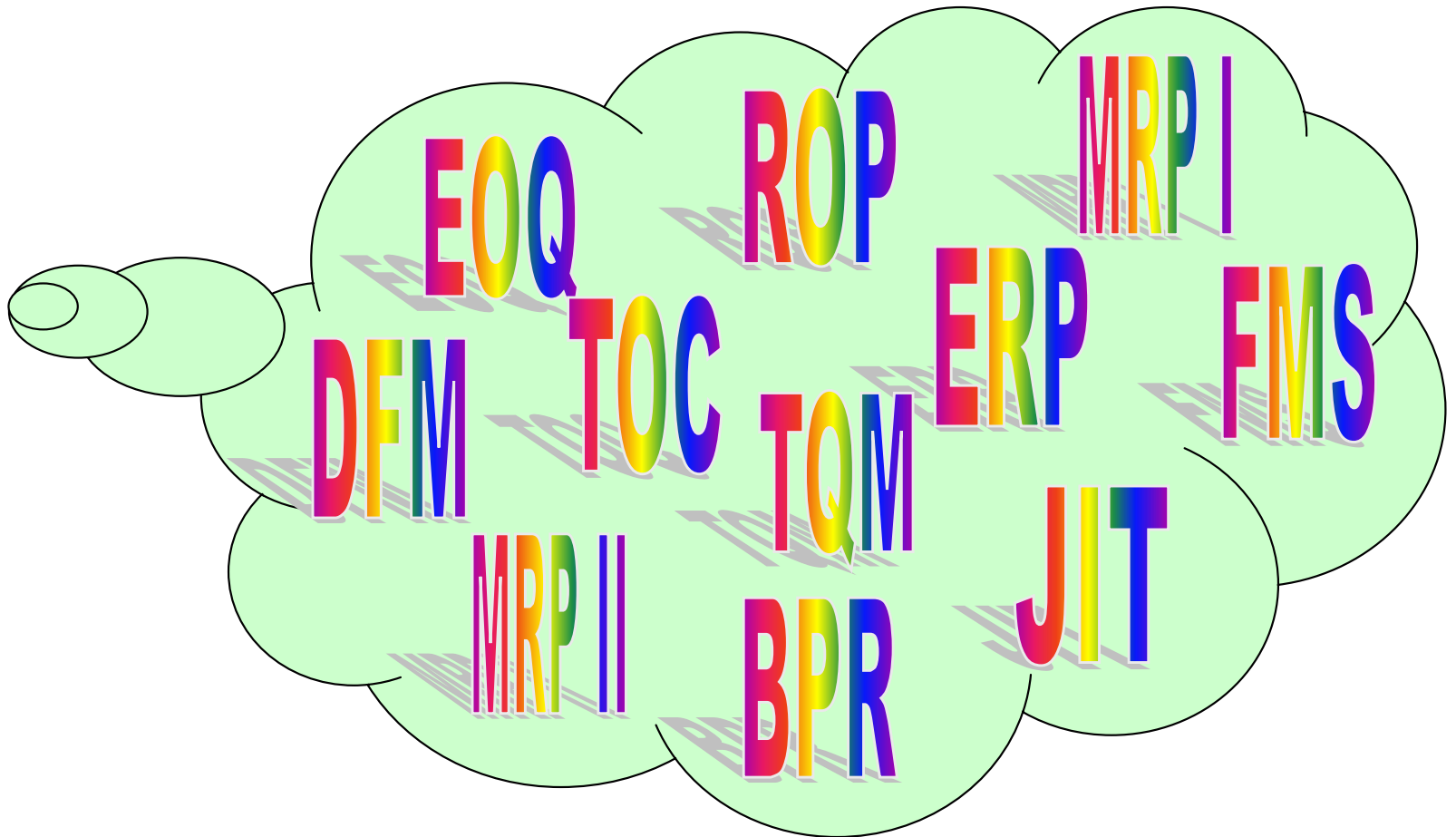


Reemphasis

- Make-to-Stock vs. Make-to-Order
 - Over Productions (BK, HP)
 - Over Product Mix (DD)
 - Over Time (S.O.)

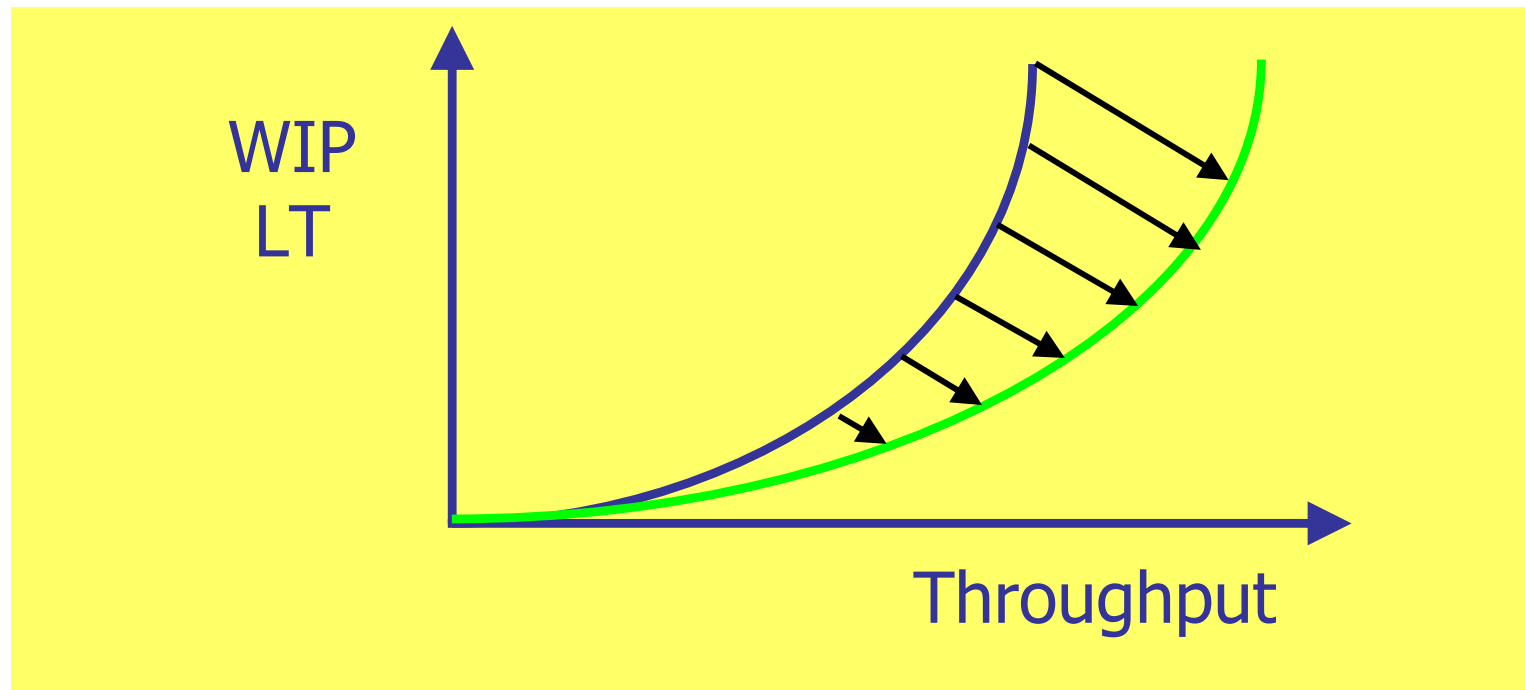


That's behind the Acronyms



Lean Manufacturing and WIP

- Toyota's Manufacturing System
- WIP vs. Throughput Curve





IN SHORT

- Use your MODEL, not (only) its #s!!!
 - Don't just optimize...
 - attack Cost Drivers
 - Don't just drive down on Cost Curve
 - Move the Cost Curve



A final Word

- Behind all the numbers are...



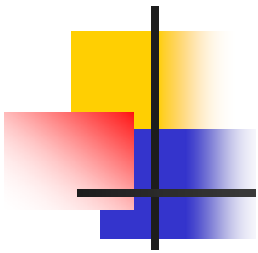
Haven't Had Enough Yet?

There is lots of more good stuff...



OM Group Courses

15.762	OM: Models & Applications	Graves	S
15.768	OM in Service Industry	Dussart, Bitran	F
15.769	Operations Strategy	Fine, Rosenfield	F,S
15.783J	Product Design & Development	Eppinger	S
15.795	Seminar in Supply Chain Mgmt.	Fine	S
15.874	Systems Dynamics	Sterman, Repenning	F,S
15.874	Application of “ ”	“ ”	
2.875	Mech. Assembly and its role in Product Development	Whitney	F
15.072J	Queues: Theory & Applications	Bertsimas	F



1. History of Manufact.
2. McDonalds/Burger King
3. Fabritek
4. Donner
5. Queueing
6. Thomas Stallkamp
7. National Cranberry
8. University Health Syst.
9. Forecasting
10. Michael Hammer
11. EOQ & Newsvendor
12. Dore Dore
13. Cisco
14. Toyota
15. Taguchi Airplanes
16. Quality Approaches
17. Sega
18. Boeing
19. DSM
20. Hewlett Packard
21. Charley Fine
22. Sport Obermeyer
23. Sorenson
24. Barilla