Charting a Critical Path

Bill Duncan spends a lot of time thinking about cycle time and critical paths.

Duncan has applied his principles to the AV-88 Harrier and F/A-18 programs at McDonnell Aircract Company and now, as director of production for the MDX, he's applying them to a key element of MDHC's future.

His teams's cycle reduction activities already have cut by a third the number of aircraft required at final assembly to meet the programs' peak production of 12 deliveries per month.

"All departments at MDHC in manufacturing and non-manufacturing areas, can make a difference by focusing on the time requested to complete a project," Duncan said.

"A reduced cyle time improves sales by putting the product on the mark as soon as possible, allowing it to become entrenched before competing products are released," he said. "Cutting the time between a customer's order and a product's delivery also builds customer satisfaction."

Reducing cycle time cuts costs by reducting inventory, obsolete or reworked parts and labor hours. "We invest less money on production and increase our return on the sale," Duncan said.

"The key to reducing cycle time," Duncan said, "is identifying the critical path. Map out what jobs must be done to copmlete a product," he said, "Then find the string of jobs that drive the time it takes to complete the product. That's your critical path. If a job isn't on the critical path, that doesn't mean it isn't important, but it won't really impact the cycle time.

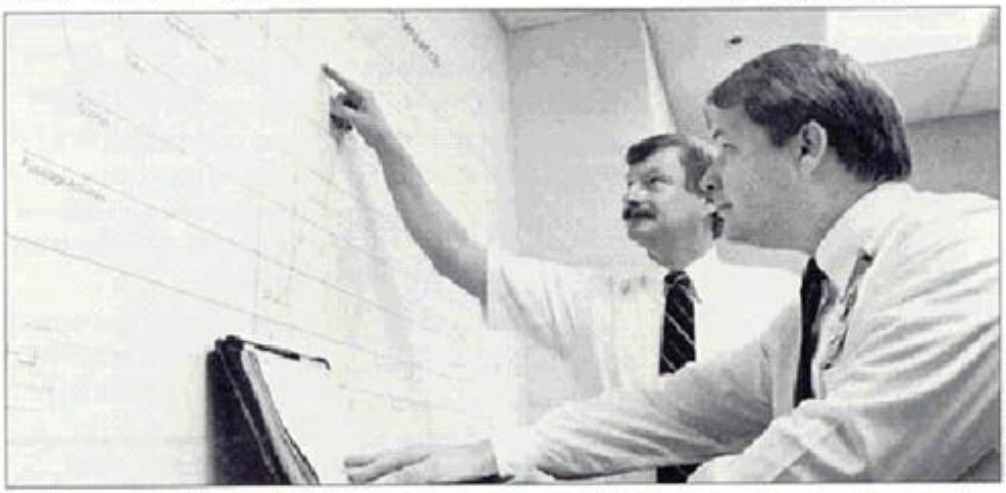
To ensure the shortest possible cycle, every job on the critical path must be continuously manned.

"This shold guide how projects are staffed and pinpoint work that doesn't add to the value of your product," he said. "Look for what we call the cause for the pause." Are parts sitting between processes and adding to the cycle time? Find out why and fix it.

Billy Lester, MDX production manager, said successfully managing cycle time on the MDX will depend heavily on teamwork. "There has to be a strong relationship between customer support marketing and manufacturing," he said. "We all have the same goals but working with each other to figure out what's best for both the customer and MDHC takes a lot of enerty and a lot of interaction.

For example, the groups will have to make key decisions on how to accomodate customers ordering or changing options of the MCX - an issue that has impacted cycle time in the MD 500 program for years.

"We have all these issues that drive cycle time and they won't get solved in a vacuum," Duncan said.. "That's where teamwork and forward thinking are critical."



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Billy Lester, left, and Bill Duncan chart the critical path for MDX production.