

**Geoff Relph & Robert Irwin**

**Case Studies of Common Problems in  
Managing Materials Requirements Planning  
and Business Systems**

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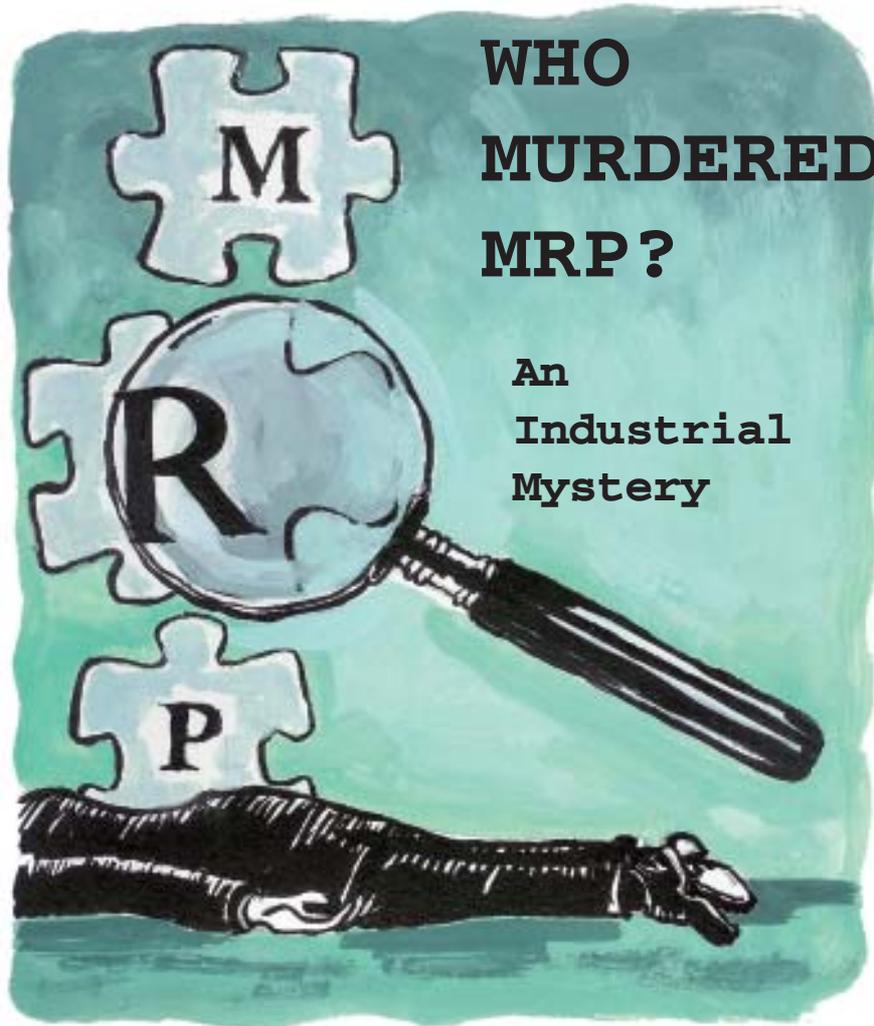
To June and Magie:  
Thanks for your patience  
whenever MRP and playing  
cars dominates the  
weekend.

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**Case Studies of Common Problems in  
Managing Materials Requirements Planning  
and Business Systems**

**It was a morning like any other  
at the Acme Widget Company...**

**P**urchase orders being filled; the production line on overtime; and Bills of Material being turned into the widgets would keep profits rolling in and the recession at bay.

The MD was humming contently and looking forward to the upcoming widget conference in Brussels. Everything was, well, perfectly normal.

Until they found the body. Mr. P. Body, that is.

There was no weapon. No sign of a struggle. Just his still warm cadaver stretched out on the factory floor.

But Mr. P. Body wasn't the only corpse at Acme Widget. Far from it.

Their Materials Requirements Planning system had coughed its last desperate breath.

**Y**up, MRP was deader than the proverbial door nail. Was it all just mere coincidence? The MD sure didn't think so.



## **An Industrial Mystery**

So faced with two murders, one real and one allegorical, where else could he turn, but to me:

## **Con Sultant, Private Eye**



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An Industrial Mystery

**"Find me the MRP  
murderer, Mr. Sultant,"  
demanded the MD.**

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Who Murdered MRP?

Detective work is just like  
MRP consulting.  
It's always *first*  
*things first.*



An Industrial Mystery

## Chapter 1

### The Clue of Borrowed Capacity



**Suspect:**  
**Mr. Manu Facturing**

The Clue of Borrowed Capacity



Who Murdered MRP?

**The MD said, " However, I must confess that we have experienced a dramatic reduction in demand of late..."**

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**I**t was a cold and dreary morning in Havant, a morning like all the others. I sat in my office waiting for something to happen. For entertainment I listened to the monotonous staccato of rain drops on my desktop. Just enough light cut through the dust on the frosted glass that I could read my name on the back of the office door:

T N A T L U S N O C

When the phone rang I had to calm my jangled nerves and discipline myself not to answer it. If they needed a detective with my kind of credentials they could wait.

I grabbed it on the second ring. They were tough times. My coffee was cold and I was out of smokes. I needed a client fast. The guy on the line sounded pretty desperate. By the time they call me, they always are.

"Has anybody touched the body yet?" I asked, as matter-of-factly as I could manage.

"Only Inspector Plodder from the Met," the caller replied. "He took one look and said we'd have to go private. He blamed the spending cuts."

"I'm on the way," I said, in the same breath that blew the candle out.

When I got there the MD, as he insisted I call him, took me straight to the scene of the crime. I would have said "murder scene", but an experienced operative like myself never jumps to conclusions. In detective work it's always first things first.



**The Clue of Borrowed Capacity**

## **An Industrial Mystery**

“Ya gotta smoke?” I asked.

The MD looked like I’d asked for a cash advance. “I’m very sorry, Mr. Sultant. But these are nonsmoking premises.”

“No worries,” I said, but I didn’t mean it.

While I chewed on my cud, the MD filled me in.

“He was found this morning, lying here on the factory floor, just as you see him. His name is Mr. P. Body. He has been with the firm for some twenty years, starting as an apprentice and working his way up to shift supervisor. He was always a loyal and dedicated employee.”

I looked around for the usual clues. There were no blood stains. There was no gun or rope or candlestick or lead pipe to be found. There was no sign whatsoever of a struggle. Mr. P. Body was lying quite serenely beside a pallet stacked high with boxes. Naturally, I asked what was in them.

“Widgets,” said the MD. “We at Acme are proud to be the market leader in the design and production of the very latest in widgets.”

I made a note of that and asked how many widgets the factory produced.

“Normally we run at maximum manufacturing capacity,” boasted the MD. “For that, we owe our gratitude to Mr. Manu Facturing. However, I must confess that we have experienced a dramatic reduction in demand of late. Still, our widgets are an award-winning and market-leading product. I am confident we will reverse the current trend in the near future.”

I knew from experience that on a murder case you have to follow every lead. The juxtaposition of Mr. P. Body’s still warm cadaver to that pallet load of widgets seemed too great a coincidence for me to ignore.

“Perhaps I should meet this Mr. Manu Facturing,” I suggested.

The MD ushered me into an office that looked like the flight deck of the starship Enterprise. Banks of computers were running at full tilt. Facts and figures, charts and graphs, rolled across their screens. In the command chair sat a tiny, clean-shaven man with thick dark hair and a neat dark suit. I’d seen his type on University Challenge: Swift with the slide rule, but a little weak in the social graces department. These days they’re called *nerds*. In my less politically correct days we

## Who Murdered MRP?

weren't so generous with our descriptive terminology.

Mr. Manu Facturing seemed hyperactive to me, but it might just have been the constant flash of data reflected in the coke bottle lenses of his horn rimmed spectacles. I thought about Mr. P. Body's grieving widow and wondered what my first suspect had to hide.

"Was Mr. P. Body working his regular shift," I asked him.

Mr. Manu Facturing tapped a key on his laptop. "No, he was working overtime. In this instance, following a recent drop in demand and subsequent layoffs, overtime was required to bring the line back up to maximum manufacturing capacity. My goal is that both machines and work force are never idle."

"Hmmm. *Maximum manufacturing capacity*," I reflected to myself. I'd only been on this case a few minutes and already I'd heard that phrase twice. I decided to follow my nose.

"Tell me, Mr. Manu Facturing," I said. "Do you operate a Materials Requirement Planning System?"

"Affirmative", he said, without hesitation.

"Are your raw materials requirements processed through MRP to your Procurement Department?"

Again: "Affirmative," with no hesitation.

I'd seen this blank-eyed confidence before. It was back when I was still on the force, on the infamous Rillington Place investigation. Could he be hiding something? I had a hunch that he was. But if I was going to prove it I'd have to talk to somebody in Procurement. I thanked Mr. Manu Facturing for his time with the proviso that I'd be back.

As the MD took me across to interview my next employee he hinted at what to expect. "Mr. Sultant, are you enamoured of beautiful women," he asked.

I'm a pretty tough cookie and I wasn't about to give any games away.

"I make it a point never to mix women with work," I lied.

I got the white hanky out of my breast pocket and wiped away the sweat that had suddenly appeared on my brow. The Long Good-Bye Case was still pretty fresh in my memory.

When we stepped into her private office I realised he wasn't kidding. There are blondes that you notice and there are blondes that you can't



## **An Industrial Mystery**

### **The Borrowed Capacity ?**

- **Utilisation of machinery**
  - **Purchasing unable to supply materials**
  - **Manpower and time wasted**
  - **Purchasing says material not required by MRP**
  - **MRP ought to be shot!**
- 
- 

take you eyes off of. She was definitely in the second category. I wasn't sure if my socks had fallen down or not as I reached across to accept her offered hand.

"I'm Miss Purr Chasing," she said and I wasn't there any more. I was thinking of kittens and cornfields and blue cloudless skies.

"Are you here because of what has happened to Mr. P. Body," she asked.

"Uh, yeah. That's right," I managed.

She was obviously used to my kind of social ineptitude. She knew how dry my mouth had suddenly become because she handed me a glass of ice water right away. It was like tackling a drought with a watering can.

We chatted for a bit, or rather Miss Purr Chasing did. I stuck to the water and tried to concentrate on more than her obvious distractions.

She told me that Mr. Manu Facturing had been screaming for more and more raw materials to keep his lines running to full manufacturing capacity. Initially, she had received his requests via the MRP system and responded appropriately. Recently, though, MRP had inexplicably started rescheduling out raw materials. This went on for some time,

## **The Clue of Borrowed Capacity**

## Who Murdered MRP?

**This Manu Facturing is a pretty selfish guy. All he wants to know about is maximum manufacturing capacity**

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until eventually Mr. Manu Facturing complained of a drastic shortfall in raw materials. He saw his lines falling below maximum manufacturing capacity.

“Not only did he blame me for his materials shortfall,” she continued, “but he condemned me because his machines were not running at full capacity.”

Miss Purr Chasing fixed me in her gaze. It was as steady as it was honest, but I could see her cool resolve was about to crack. So was mine. I was ready to sell her my car for a fiver.

“I don’t think it was my fault at all,” she said. “I was only doing my job.”

I’d heard that one before, but by this time her statements were choked out between sobs: Part confession and part alibi.

“He made me do it,” she pleaded, and I believed her. “I organised my procurement according to the instructions of MRP, which had told me to reschedule. Then, in order to get around my materials rescheduling, Mr. Manu Facturing ignored MRP altogether. He made his materials requests direct.”

Sometimes you have to be tough. My next question was obvious.

“What happened then,” I asked her.

She dabbed at a tear and mascara ran at the corner of her eye. Before she could compose herself to reply, the MD stepped in with the answer.

“By that time Mr. Manu Facturing had been running the lines at such capacity for so long that we found our inventory had grown dramatically. We had more stock than we had orders. We were forced to cut back on production and lay off manufacturing staff. Then, when we did have



## **An Industrial Mystery**

a special order to fill, we discovered that the raw materials had been used up in producing the standard widgets, which were in inventory. Consequently, we had to purchase more raw materials and call in workers on overtime. All of our production workers, including poor Mr. P. Body, were on overtime last night.”

It was all falling into place. I puffed imaginary clouds out of a pencil and explained.

“This Manu Facturing is a pretty selfish guy. All he wants to know about is maximum manufacturing capacity. In order to keep it, he borrows capacity from future weeks. It all seems pretty harmless at first. It always does. But, when MRP and Miss Purr Chasing here respond by cutting his materials, he starts to panic. So what does he do?”

I dropped in a pregnant pause to emphasise my point.

“He kills off MRP! He refuses to use the system. And he refuses to recognise the reasons MRP has rescheduled out his raw materials. He insists that Miss Purr Chasing follow his direct instructions, rather than MRP. Instead of using the system, he overrides MRP to meet his personal goals. And look what that’s led to.”

“MRP is dead and I’ve got a corpse on the factory floor,” said the MD.

They always look to the tough guy for the answers. Now that Miss Purr Chasing had herself under control, that’s what she did next.

“If Mr. Manu Facturing killed MRP, who killed Mr. P. Body,” she asked.

I would have answered her, but I was already far away. I was playing with kittens in a corn field.

## Who Murdered MRP?

