



PEX

ISSUE #1
WINTER 2014

3 Rejuvenated



5 Sceptic
to believer



6 Listening to
the women in
white coats



OTD
~~75%~~ 98%

ORDER BACKLOG

~~£1,500,000~~

BID LATES

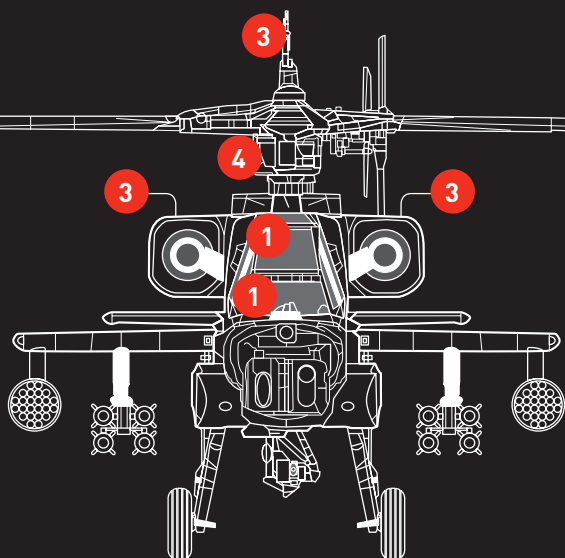
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However you slice it, Meggitt Production System is already transforming Meggitt.
A quarter of all Meggitt locations have already begun their own MPS journey.

We visited pilot site Meggitt Avionics to talk to people across all functions to hear how they have embraced a leaner, fitter, more responsive way of running their operations.

MEGGITT

BOEING APACHE AH-64D & AH64E



WHAT MAV MAKES

The history of Meggitt Avionics mirrors the 150-year history of avionics development since our founder, Sig. Negretti, first took his altimeter up in a hot air balloon. Today the company is known for the design and manufacture of high performance cockpit displays, specialist air data products and life support systems.



1

Secondary flight display systems—lightweight, compact, standby flight display providing all the critical flight data—attitude, altitude, air speed and heading—necessary to fly the aircraft safely in an emergency. More than 6,000 units in service worldwide.



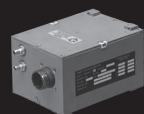
2

Magnetometer heading sensor—a stand-alone microprocessor-based unit providing digital heading data.



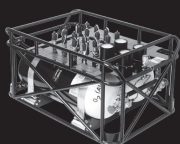
3

Helicopter air data measurement system—using a unique swivelling pitot probe to measure airspeed across three axes and down to zero knots in the hover.



4

High integration primary air data computer—robust, service-proven and extremely reliable. More than 5,000 units in service worldwide.



Oxygen systems for high altitude breathing in non-pressurised aircraft.



Welcome to the first edition of OPEX, the Meggitt Production System journal of record. As many of OPEX's readers already know, *gemba* is the Japanese word for 'the real place'. In Lean terminology it means 'where the value is created'. For Meggitt, like all manufacturing companies, that place is the shopfloor, where everything our customers really value about us finds its purest expression.

Meggitt Production System—our single, global approach to the application of Lean tools and practices—is now being rolled out worldwide. Its job is to make sure that everything we do, and everyone who does it, is dedicated to supporting 'the makers'. In a real sense, as Meggitt Avionics Production Manager, Lee Barnes affirms on page 5, MPS implementation has meant turning Meggitt upside down—managers, team leaders, production supervisors, all now work 'for' the shopfloor. It has meant rebuilding the organisation around what we call Daily Layered Accountability, a structure of interlocking early morning meetings which constantly spotlight the real reason Meggitt exists—to make world-beating products. But most of all it has meant creating a culture that not only *enables* the shopfloor to call the shots, but *encourages* it to.

Meggitt Avionics is among the factories already living with MPS. The response there has been extraordinary. People at all levels speak of having been reconnected with the true value of their work; of feeling heard for the first time; of being freed to really care about what they do and how they could do it better. In the coming pages Meggitt Avionics staff and managers explain in their own words what MPS means to them.

Amir Allahverdi
Group Operations Director

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If you understand operations management, you can see how good MPS is

And if you know Mark Crompton, Operations Director at Meggitt Avionics, then you'll know that this is praise indeed. "It's the broad engagement it achieves that makes me confident we really will succeed in inverting the pyramid [that is, putting the rest of the organisation, including senior management, at the service of the makers]. In the past I've seen it tilt and I've seen it wobble. But this time it's going to go."

That's not to say Crompton didn't have his doubts initially. But they didn't last past the first training. "At boot camp [the intensive Meggitt Production System (MPS) training for site leaders] I could see that this had been designed to build on the existing Lean and continuous improvement knowledge of people like me. But things like the Leader Standard Work and the

Companies often like to say they do Lean when in reality they do kaizen events or fixes

'no fly zone' idea [which keep the early morning clear of meetings so everyone can attend their Daily Layered Accountability meetings], these are clever ideas and they really work. Amir [Allahverdi], Louis [Chavez], Mike [Haney] and the rest of the MPS team have done a really good job with this. They clearly know exactly what they are doing. MPS is as well-structured a system as I have ever seen."

Taught by the Japanese

And Crompton has seen a few. He spent eleven years at Aerostructures Hamble (now part of GE Aviation), first as operations director and then for eight years as managing director. When they won a large Boeing contract he and the company had the benefit of working with the Japanese Shingijutsu consultancy founded by three of the original Toyota Production System pioneers.

"Companies often like to say they do Lean when in reality they do kaizen events or fixes. That was us really. Boeing used to send lots of people round our plant. We were probably their supplier with the best Lean operation in Europe. But in comparison to MPS,



MPS reminds us that the people who really know how to do a job are the people who do that job. They are first to see a problem and the opportunities to improve

we were nowhere near getting the 'visual' factory up and running and nowhere near getting broad-based engagement in daily operations using something like Daily Layered Accountability."

Off the top of his head, Crompton cannot think of a single person at Meggitt Avionics (MAV) who is not involved in an MPS-related continuous improvement process.

Started on the shopfloor

His early days on the shopfloor and then as a young engineer, living the decline of British manufacturing in the 1980s, have made Crompton almost evangelical about what he calls "full engagement".

"When I started out we had a form of Lean. It was called

'method time and motion' (MTM). Every little detail of a process was standardised, with time stripped out second by second and the ergonomics measured and perfected. The hosiery plants I visited as a young production engineer were the leanest you could imagine. Those women worked unbelievably hard and never stopped."

Continuous improvement was embedded in the system of 'piece rate'. Because operators were paid a negotiated rate per unit, they could take all the benefit of any efficiency gains made before the next round of rate negotiations. This created a constant incentive to develop short-cuts and

make special tools, improving the process and shortening production time. And, since operators had to carry the cost of errors, quality was maintained as well. "I worked under that system, building axles," recalls Crompton. "It generated a very high degree of what we now call engagement, I can tell you."

The system broke down under the twin pressures of union power and fierce cost cutting. Out went time and motion but nothing replaced it. This was the era of 'I don't pay you to think!' and 'us and them'. "Very many British factories were culturally bereft back then," Crompton recalls with sadness. "People still wanted to be engaged and wanted to do a good job. But for a long time no-one ever asked."

I've heard it said that DLA is being overplayed in MPS roll-out. I disagree. If anything, it's being underplayed. It is so powerful

Lean on me

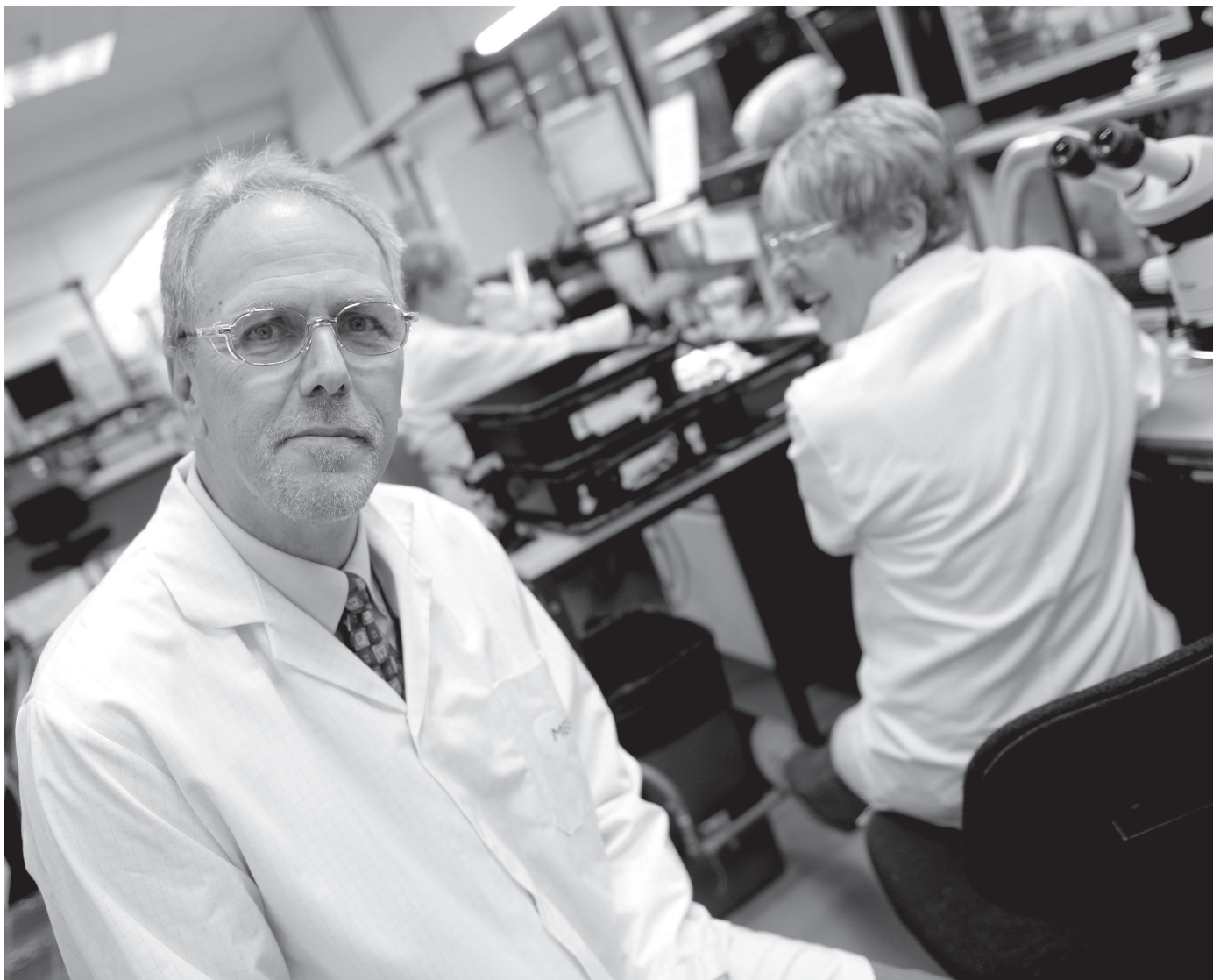
All of which explains why the strength of MPS buy-in across MAV hasn't really surprised him. "Of course people want to be involved in improving their own work. Why wouldn't they? MPS reminds us that the people who really know how to do a job are the people who do that job. They are first to see a problem and the opportunities to improve. They often know best what will and won't work. There's a lot of people involved in this business who have been here for a very long time. We've got a guy who's been working on oxygen products for 40 years. [Take a bow Laurence Hawkins.] The right question for management to be asking has always been, how can we bring all that knowledge back to the table? Now, with DLA, we have a system that can do just that."

DLA underplayed

It would seem, then, that DLA has no bigger fan than Mark Crompton. "I've heard it said that DLA is being overplayed in MPS roll-out. I disagree. If anything, it's being underplayed. It is so powerful. Get DLA working right and the other parts of MPS almost fall into place. The Living Pareto charts alone are incredibly powerful, giving you very nearly the whole story."

DLA unleashes a complex mix of factors which can completely transform working culture in a very short time, he says. "For example, DLA has made our failures very visible. So, because we all look at them every day at morning DLA meetings, we are 'living' them, not trying to sweep them under the carpet. At the same time we are all involved in developing and applying solutions, 'countermeasures', and allocating individual responsibilities for chasing them up and seeing them through."

The effect this has had on attitudes is at least as striking as the impact on the KPIs themselves. "Before DLA



Above: Mark Crompton: Customers want suppliers who make life easy for them and when they find them, they stick with them. With MPS, I believe Meggitt can become one of those no-issues suppliers.

deployment, on-time delivery [OTD] was as low as 80% and that was viewed as the norm. Perhaps the mountain felt too big to climb. From 20 'lates' a week we are now down to just one. But more people feel more distraught about that one, than they ever did about the 20."

Walking the walk

Nor should we underestimate the importance of MPS in changing how MAV is managed and led, says Crompton. "If you don't lead by example, how are you going to convince people that the MPS

Things are very different now. With the introduction of DLA the senior team is far more visible to the wider workforce. We all make a point of attending the DLA meetings and Annette [MAV MD] is at every Focus Factory and as many DLAs as she can manage. So people have started to understand that we are serious about this and that they are being listened to."

What customers want

Crompton is not the sort of man to get over-excited about what's been achieved so far. He's too

more work to do. We've just settled into the new factory and we are really only just getting started with defining where the quality and productivity improvement focus needs to be."

But even he can't suppress a smile when he talks about what's possible. "So far we've been focusing on

operations. But Annette has already got everyone, right across the functions, looking at how MPS ideas and techniques can be applied to everything MAV does. So we are just starting to understand the real power of MPS and it is very impressive.

"Fundamentally this is about growing the company—by pleasing customers—by giving everyone in the company

what they need to succeed in their work. It's not easy getting the big aerospace companies to pay premium prices. But in my experience, if you are easy to work with, deliver on time and the bits all fit, then you can. What people like Boeing want is suppliers who make life easy for them. When they find them, they stick with them. With MPS, I believe Meggitt can become one of those 'no issues' suppliers." ■

DLA unleashes a complex mix of factors which can completely transform working culture in a very short time

vision of inverting the pyramid isn't just hot air? When I arrived here I met staff who said they had been through a time when directors were not seen much.

much of a realist for that. "We've made a good start—OTD, DPPM [defect parts per million], these are good—but we've really only broken the ice. There's so much

MARK CROMPTON'S TOP TIP

Don't forget the 7th 'S'

Crompton likes to talk about "the 7th S". It stands for 'shovelling' (allegedly) but he has a serious point. He means clearing the decks, creating order, making space. More than 100 tons of redundant kit and materials had to be removed from the new Meggitt Avionics factory before they could start the relocation.

Rejuvenated

Sean Holland is production supervisor on the repairs side of the business. If he has one complaint about how things used to be before Meggitt Production System (and he has plenty), it is that nobody seemed to take his problems seriously. Now, he says, the opposite is true.

Do I feel supported? If you'd asked me that a year ago there'd have been a few swear words. People in other departments would say to me, 'Yes, well, we'll help you later on but we're busy at the moment.' I don't think we really had a single focus as a company before. Now, some days, it can even feel like I've got too much support if anything."

increase. A huge achievement by anybody's standards – except, it seems, Holland's. "Sorry. I want 100%," he says with a shrug.

Taking such a huge improvement so lightly makes him sound like a man trying to make up for lost time. "You've got to imagine, for 15 years I'm running round like a loony. Then all of a sudden I've got that support! It's like, hang on a minute Holland,

pet niggles and DLA (Daily Layered Accountability) and the daily reporting of KPIs gets them all out in the open. So you won't be able to solve everything fast enough for everyone. You'll have to chip away at some things and park some others. Bearing in mind you're going to have to coach the rest of your team, remember that some will find that frustrating."

Making a difference

Holland freely admits that he tends to take his work frustrations a bit too personally. So, is he any happier now that he is getting "too much support" rather than too little? Interestingly, 'happy' is not the word he uses. "When I started at this company 16 years ago I was full of ideas about the things we could do better. That's never really gone away for me but I think it had to be suppressed. One of the big things for me is that MPS has allowed me to bring that back

Do I feel supported? If you'd asked me that a year ago there'd have been a few swear words

But that's a good thing? "Oh yeah. Now we get much more support. I see Lee [Barnes, production manager] several times a day. And Dean and I have the time to support each other too. [Dean Ridley is the 'new build' production supervisor.] And if I don't get the support I need, I know I can move it up to the next level."

step back a bit, slow down, you don't need to rush around now. You can focus."

Keep calm, be patient

Taking it steady is Holland's main advice to colleagues starting out on their own MPS journey.

100%

In the run up to Meggitt Production System (MPS) implementation Holland's biggest worry was materials supply. "If I don't get supplies in on time, there's no way I can get kit out on time. That was a major headache last November but we've seen vast improvements since then." Over the last few months, and in spite of a site move for half the business, Meggitt Avionics (MAV) has been regularly hitting 98% on-time delivery (OTD). That's a 15- to 20-point

You've got to imagine, for 15 years I'm running round like a loony. Then all of a sudden I've got that support! It's like, hang on a minute Holland, step back a bit, slow down, you don't need to rush around now. You can focus

"One of the key things you need is patience. Don't be like me, expecting everything to be done today. Everyone has got their own

up to the surface again. I wouldn't say I'm happy. But I do feel..." He pauses to find exactly the right word. "... rejuvenated." ■



Above: Focus Factory: when MAV's 20 or so functional leaders gather each day to discuss all issues arising from the morning's Daily Layered Accountability meetings, which start on the shop floor. Attendance is compulsory.

Silo-busting in DLA's no-fly zone

The spinal cord of MPS is DLA, or Daily Layered Accountability. This multi-layered structure of interlocking meetings right at the start of each working day flows fresh, accurate performance and operational information up and down the business. From 8am and for two hours only DLA meetings must take place. This is the so-called 'no-fly zone'. Each meeting follows an agenda structured around safety, quality, delivery, inventory, productivity—and attendance is compulsory.



Above: Sean Holland: Over the last few months, and in spite of a site move, we have been regularly hitting 98% on time delivery.



DLA starts on the factory floor. At 8am production cell teams review the previous day's performance and plan the day ahead. Immediately afterwards, cell leaders and representatives from the functions perform a similar review but at the value stream level. Finally, the whole plant's performance is reviewed by senior management at Focus Factory. OPEX recently visited Meggitt Avionics one morning to watch DLA unfold.

07:59 A cell team is gathering in front of a DLA board positioned prominently in their work area. The whiteboard's graphs and charts provide an at-a-glance summary of everything the cell needs to know about its current performance and problems. Red blocks, bars and lines reveal opportunities to improve. Green says things are 'on track'. Ten or so people watch the clock and wait. Most wear white lab coats or the blue of the engineering shop and have safety glasses perched on their noses.

Because Meggitt Avionics is a self-contained business, all its functions, including sales and marketing, procurement and HR, are simultaneously running similar meetings, using similar tools.

08:00 At 08.00 sharp Sean Holland starts. The events of yesterday are reviewed and the needs of the day(s) ahead considered. Prescription safety glasses are on their way—recently installed benches aren't bright enough— new components have increased rework. Are altered procedures for selecting fasteners hurting overall productivity? Does a casing edge need redesigning to speed assembly? Problems are logged, countermeasures and

responsibilities for them allocated. Anything the cell cannot solve for itself is flowed up to the value stream meeting which will start nearby just minutes after this one ends.

08:11 Finished. The whole meeting lasted barely 10 minutes.

08:20 While everyone else returns to their benches, new-build value stream (VS) attendees begin to assemble. Cell leaders and function representatives from the Production Engineering Department (PED), Procurement, Quality and Continuous Improvement gather in front of an electronic board. This is our first glimpse of the cross-functional, silo-busting power of DLA. Everyone has one eye on the digital clock in the corner of the large interactive whiteboard. A colour-coded, multi-layered spreadsheet fills the rest of the space.

08:30 On the dot of eight-thirty Lee Barnes, standing in for Dean Ridley, takes a deep breath. Safety. Quality. Delivery. Inventory. Productivity. In a blizzard of acronyms and code numbers the meeting marches smartly on. Reports are concise. What's on time, what's delayed? Parts and materials incoming. Product outgoing. Questions are few. Answers are ready. Decisions are taken briskly.

08:42 After just 12 minutes the meeting is over and we are on our way to Focus Factory, the plant-level review.

08:50 The OER (or operations excellence room) is dedicated to the Focus Factory stand-up meeting. Its walls are almost completely covered with graphs and charts, many of them updated early this morning. This is 'the big picture'—the current state of play across the whole operation. The information on these walls is permanently on display and can be viewed by anyone at any time. No one manager 'owns' it. It belongs to everyone. In April many of the graphs and charts carried yellow stickies to highlight problems with the data or the processes that generated them. Six months on there are very few, if any, to be seen.

08:57 Three minutes to kick-off. The twenty or so Focus Factory attendees include: all value stream leaders; site function leaders from HR, sales, procurement, commercial, finance, materials, production, engineering, compliance, production engineering and repairs; and the site leadership council led by Annette Hobhouse and Mark Crompton. All are waiting for the off.

09:00 Safety? "It's a green day." Quality? "Green as well—the missing O ring is due later today—CAA visit—daily quality clinics working—corrective actions overdue?" Delivery? "Shipped close to a million—five-point-five million in plan—approval to ship to customer now letter of credit received—couple of things that could go into arrears—risk on AMOS vessels still—HIADC refresh

delay? Signed contract from customer due this week—ISFD? All done. Tremendous effort, amazing achievement, let's celebrate!" Inventory? "Green!" Productivity? "Key issue is ISFD—root cause—actions—rework—resource limit." Any other business?

09:09 The main meeting ends with Annette Hobhouse's warm thanks for everyone's hard work at last weekend's open day. As people drift away to their desks several micro-meetings break out spontaneously. ■

This is our first glimpse of the cross-functional, silo-busting power of DLA





Sceptic to believer

Production manager Lee Barnes has had his world turned upside down by Meggitt Production System. And he likes it. Here, in his own words, he talks about the experiences that turned him from sceptic to believer.

On day one if you'd asked me, "Do you want to quit this and go back to what you were doing before?" I would probably have gone, "Yeah."

Even after training, I was negative at times. I'd be thinking, 'I've seen this before... I've done this already... this is never gonna work.' But then there'd be a twist that makes the MPS approach slightly different—and suddenly it does work! By the end of day four I was buying into it.

MPS proved me wrong on several occasions

If someone had said to me two years ago, "From half past seven to half past nine you're not going to do any production work, you're just going to attend Daily Layered Accountability (DLA) meetings", I'd have said, "Two hours out of my day! We're not going to achieve anything!" But it has worked.

I couldn't see how the daily performance DLA board could be maintained. I thought it was going to take too long each day. But it doesn't. It just fits in as part of the day.

On numerous occasions I heard that we were going to turn the pyramid upside down. That management, team leaders, production supervisors, all of us, would be working for the guys who actually make things and get them out the door. I thought, "Yes—this is great. Fantastic words. But it's never going to happen." Actually it has. I think,



Above: Lee Barnes: Lots of meetings I used to attend don't happen anymore. The DLA process fills the gaps so I can focus on driving improvements for the shop floor.

as a manager, I'm more surprised by that than most other people.

Now my job is making sure the shopfloor can do its job

When I was told that a lot of the things I thought were key to my job were no longer necessary, I thought, 'We're going to fall on our faces here.' We haven't. I thought I was already supporting the shopfloor. But I was probably too busy doing other things, some of it duplications, things already being done by other people. Lots of meetings I used to attend

I'm more focused on driving improvements for the shopfloor and MPS allows me more time to do that.

People aren't second-guessing what I think any more

In the first few days of MPS I was observing a level one DLA meeting, just standing at the back. A guy asked about upgraded computers and it all went quiet. Someone said, "We're not allowed to have them." That seemed odd to me so I asked why. "Because you won't approve

in a couple of weeks.

DLA gives everyone a chance to speak up, ask questions and explain themselves. Now there's

The job I've been doing for years! How dare they criticise me? But actually they weren't criticising me. It wasn't personal. It was just

MPS gives you a vision of how much more you really can achieve. Getting up to 98% on-time delivery (OTD), for example, is fantastic

no second-guessing what I might think and no misunderstandings about what's really possible.

guidance to help me see how some things might be done better.

Nothing is hidden in the 'visual factory'

When I walk around the factory I can look at any DLA board and see immediately if there's something I can resolve quickly for them. Before DLA I might never have known about most of those things. Or else people would have thought I knew when I didn't.

MPS is contagious

It surprised me when departments not involved in MPS at the start quickly began pushing for it. I thought they'd be reluctant. But they were soon saying "We want this too!" They'd already heard it was something good.

Now we have a vision

MPS gives you a vision of how much more you really can achieve. Getting up to 98% on-time delivery (OTD), for example, is fantastic. But we all now believe we can do better—that perfection is achievable. We know it's going to be a long journey, but now we actually believe we can do it. ■

I thought I was already supporting the shopfloor. But I was probably too busy doing other things, some of it duplications, things already being done by other people

don't happen anymore but the DLA process fills the gaps. Now

them," he said. It was the first I knew of it. They had the computers

at the very beginning. 'Someone is telling me how to do my job!

Up close with a Lean MD

Viv Cane normally spends her days working alone, deeply absorbed in organising the many tiny, delicate components that make up a Meggitt Avionics secondary flight display. But during the Meggitt Production

"Working through a problem in a group, talking it out, guiding everybody to a good answer. That's the essence of MPS."

And Cane has some advice for other Meggitt leaders: "I think it would do a lot of good, across

I think it would do a lot of good, across every factory, if the top people got involved like that in workshops on the ground level. Give your people a chance to really see what you are made of. They'll respect you for it

System training she found herself in the same workshop group as her managing director, Annette Hobhouse. The experience gave Cane special insight into what it takes to be a successful MPS leader.

every factory, if the top people got involved like that in workshops on the ground level. Give your people a chance to really see what you are made of. They'll respect you for it." ■



Above: Annette Hobhouse: Success for an MPS manager lies in 'setting up others to win'.



Above: Long-time colleagues. Front: Colleen Durrant agrees with Viv Cane (back): We all have to do this together. We [in the production cells] won't keep progressing if everyone around us isn't wanting to do the same.

Listening to the women in white coats



Viv Cane and Colleen Durrant build three-inch secondary avionics display and sub-assemblies. Each unit takes about three hours of the kind of precise, painstaking and absorbing work in which time stands still.

All the strands of the business are interlinked so we all have to be involved for this to work properly

Both women have experience of Daily Layered Accountability-type systems at previous employers—Cane working on marine systems and Durrant building lasers.

Joining Meggitt Avionics (MAV) six years ago felt like travelling back in time for Cane. "It felt a bit like the Dark Ages," she admits. Shopfloor problem-

solving barely existed and work-arounds and make-dos were common. "If your supervisor couldn't sort something out for you, the problem could drag on for ages."

Wasn't that a bit depressing? "Not depressing. I love the work too much. But it was frustrating and there was a lot of tension sometimes. You needed a dark sense of humour."

Durrant re-joined MAV two years ago. After a particularly rough day, she would sometimes head home thinking 'I don't want to go back there ever again.' "You can't lose your temper at work so you do take the stress home with you," she says.

And what's it like now? "Oh it's much, much better," says Cane brightly. (The answer was written on her face a good second or two before she spoke). "The frustration is mostly gone. If we bring something to the morning meeting, we know that when it goes on the DLA board it can't be ignored or forgotten. We have a voice now and it

is being heard. There's a big improvement in how quickly things get sorted out. It's such a relief."

Durrant hasn't forgotten the old frustrations of trying to explain something important when nobody seems to be listening. "It can be very hard when you can't seem to get your point across. Now, once it's written on the DLA board, you know that someone has to try and understand what it is you are getting at."

Both women say Meggitt Production System has been very well-received right across the organisation. Even some notable sceptics have quickly been won-over by the reality. But both women still worry that not everyone is pulling their weight and that some managers might slip back into old ways.

"DLA doesn't suit some people," says Cane. "It requires a certain mind-set. You have to enjoy being more involved and you have to accept that it means more effort. Once you buy into it, you can't be lazy. You've got to get yourself moving."

"Most of us really want to keep pushing the improvements and make things even better," says Durrant. "But we all have to do this together. We [in the production cells] won't keep

progressing if everyone around us isn't wanting to do the same."

Their immediate cell colleagues are not the concern. "We are very lucky. The people we work with are only too willing to help if you have a problem," says Cane. It's more a question

we've got what we need on the shopfloor. That makes a big difference for me."

And what about managers who might be uncertain about what MPS means for them? Cane: "I'd say, make sure you talk to your people on the shopfloor.

We are impatient for change. Once you see what's possible you do get hungry for more

of the support the cell gets from outside. "We do still hear a bit of the old 'that can't be done' and 'that'll take a while'. They're letting the side down really. All the strands of the business are interlinked so we all have to be involved for this to work properly."

And what do they say to the sceptics? "I tell them they should be doing it for themselves. Their day will be easier and they'll get more out of their life at work," says Cane. "We are at work for such a long time. We really should try to get as much satisfaction out of it as we can."

"And it's not like it's change for change's sake," adds Durrant. "It's responsive change—responsive to us making the things we sell making sure

Their ideas have never got to the surface simply because of where they work. But they are full of good ideas because they do this job hour after hour, week in, week out. DLA can make the most incredible difference. Listen to them."

So is everything in the garden rosy now? Cane and Durrant look at each other with amusement. "Nooooo," they chorus. "Some days it still feels like you are banging your head against a brick wall," explains Cane, "but it's different now. Back then it was because nothing ever seemed to change and nobody seemed to listen. Now it's because we are impatient for change. Once you see what's possible you do get hungry for more." ■

Want to know how to cross t

Six months into Meggitt Production System (MPS) deployment and there's a real buzz at Meggitt Avionics. On-time delivery is pushing 100%. The order backlog has been cut by 99%. Overdue tenders ('bid lates') are becoming a thing of the past. Better still, those key performance indicators tell a deeper story. Talk to anyone and real enthusiasm for the new approach soon bubbles up through the conversation. This is an operation using MPS to transform itself from the bottom up.



Above: Annette Hobhouse: Lean is not about tools, it's about people. If you try to 'do Lean' with command-and-control managers who do not believe it, the benefits never last.

MD Annette Hobhouse has had the helm of Meggitt Avionics (MAV) for just months. Understandably, she is quick to sound a note of caution. But she looks and sounds like

at AgustaWestland. "A Lean consultant we hired named Sid Joynson—a great guy—helped me to see that Lean isn't about tools, it's about people. For Lean practices to take root, you have to get the culture right first. If you try to 'do Lean' with

Hobhouse appreciates that the new 'soft' skills may not come naturally to some—perhaps especially after a lifetime of commanding and controlling. But she firmly believes that almost everyone can learn to do it well and, furthermore, that, "It is every manager's duty to think about how best to bring on the next generation."

Hobhouse's favourite coaching mantra is 'Ask questions until good answers emerge'. But the real key to good coaching lies in the kind of questions you ask, she says. "Say you are a tennis coach and your pupil is missing too many balls. 'Are you watching the ball?' you say. The pupil is likely to reply defensively—"Yes, of course I am"—because the question implies that they are doing something wrong. A much better question would have been, 'So, was the ball spinning when it came across the net?'. Now the player has to adopt the desired behaviour to answer the question properly. By simply changing the way you framed the question you have helped the pupil understand the problem, changed his behaviour and improved his play. All without any undertone of blaming, intended or not."

The same is true in the workplace. "If your manager just fixes your problem for you, you are none the wiser. But if she uses questioning to guide you to discover the

Ask questions until good answers emerge

a woman who is enjoying every minute. "People are right to be excited. It's still very early days but we've already seen some very useful gains from MPS."

Lean on me

That "we" is instructive. It is not the royal 'We'. She is referring to everyone. For leaders like Hobhouse the strict hierarchies and big sticks of old-fashioned command and control are gone. Influence is the new power. Success for an MPS manager lies in 'setting others up to win'.

"My day has more in common with a head coach than an old-style MD. I'm frequently out of my office, getting around the operation— supporting, developing, guiding and trying to make sure good work is always recognised and rewarded. Making it easier for people to co-operate and collaborate across the old boundaries is also very important. That means creating common objectives and priorities for the business and

command and control managers who don't believe in it, the benefits never last."

Which is precisely what sets MPS apart. "MPS is being done properly. It's being led by example, right from the top, by people who are fully committed. It's being implemented by Meggitt's own experts, not consultants. And it's all supported by a huge investment in coaching and skills development because it is understood that this is what it takes to get the culture right company-wide."

When Chief Executive Stephen Young decided to earn his Lean Yellow Belt (Meggitt's first), he came to MAV to do it. Young's determination to lead by example now finds its echo throughout MAV. Even though the morning Factory Focus meeting could proceed without Hobhouse, she makes sure it never has to. "It would be wrong," she says firmly. "If senior managers don't lead by example these things soon fall apart. If I miss a meeting people

Lean isn't about tools, it's about people. For Lean practices to take root, you have to get the culture right first. If you try to 'do Lean' with command and control managers who don't believe in it, the benefits never last

then making sure that everyone is lined-up behind them."

Everyone in to bat

With two decades of Lean implementations and consulting behind her, Hobhouse could write a book about what's special in MPS. In fact, she sums it up in a single word: "Culture." Like many managers of her generation, she spent a long time puzzled by why so few Lean benefits seemed to stick. The penny dropped when she was Head of Operations

assume that the things I said were important last week aren't important anymore. And what's true for me is true for every manager and team leader at every level. Jack Welch [CEO of GE, 1981-2001] was a great hero of mine. He used to say, 'To succeed you need everyone in to bat.'"

Managers should coach, not 'fix'

Coaching is the mainspring of that MPS workplace vision in which everyone is 'set up to win'.

answer for yourself—"How often have we seen this? What are the most likely causes? How can you work out the root cause? What containment action is needed? What corrective action? How can we verify that it has worked?"— then you understand the thing better because you have had to think it through, your confidence is higher because it was you who solved it and she has shown you, with her own behaviour, how you might coach others. In MPS, everyone can be a coach and



On the tightrope? Start walking.

everyone should be a coach—just as everyone, at every level, can benefit from coaching.”

Less ‘planning’, more doing

Getting people off the starting blocks more quickly is an important part of coaching. Here too, command and control has a lot to answer for, says Hobhouse. The person who is ‘stuck’ is often nothing of the sort. They are simply waiting for permission to act—permission they probably shouldn’t need. Or they have become bogged down in a ‘planning’ process which was always pointless. There is, she notes, a very fine line between planning and procrastination.

“I remember a management training course in Hong Kong. I was with a group of very senior managers and we all had to walk across a tightrope with a bucket of water. We had half an hour to do it, that’s all. They immediately started ‘planning’ their ‘solution’! I turned to the invigilator and said, “If we fall off, is there a penalty?” “No,” he said. So I said to the guys, “Listen. I know I can walk this tightrope. You follow me. If we fall off we can start again but we are much more likely to get the hang of it if we get on and try.”

know needs doing. It’s about getting on with it. You succeed by experimenting, not by sitting back and waiting.”

An end to conflicting objectives

The much talked about silo-busting power of MPS is a source of particular pleasure to Hobhouse. She secretly dreams of a completely boundary-less organisation: “I don’t believe in boundaries. I believe there are jobs that need doing and a big pool of talented people to do them. We should all muck in and get them done.” But for the time-being she will settle for developing a company that finds it much more natural to co-operate and collaborate internally.

Operational alignment is, then, a very high priority. From simple admin slip-ups to departments barely on speaking terms, many common operational problems are caused by nothing more than clashing priorities, says Hobhouse. “Without operational alignment, one team’s priorities can easily be another’s paralysing resource crisis. What if Commercial is

power to our processes. Then, in everyone who touches that process, at every level, we need to encourage a healthy obsession with improving it.”

The saying ‘accept only good work—do only good work—pass on only good work.’ (another of Hobhouse’s favourites) sums up what she means. “How often do we receive less than perfect work from a colleague, say nothing and sort it out ourselves? Why aren’t we up-front about the problem? No-one should have to re-do somebody else’s work. And we should be able to support our colleagues with this kind of feedback. Done properly, this isn’t blaming, it’s coaching.”

Problems are never personal

Talking to Hobhouse at length, her faith in her staff seems unshakable. “99% of our people are great and want to do a good job. If we want them to change and develop, take on new roles, acquire new skills, do things differently, I know they will. We just have to give them the support and encouragement they need.”

Where there are problems, they are almost always the product of bad management or

Spotting the signs of decay

Annette’s ‘bad factory’ checklist

Too much fire-fighting

Too many customer calls (happy customers seldom ring)

Lots of planning, not much doing

Too much “do as I say”—not enough leading by example

Functional silos obstruct collaboration

Too many work-arounds

Persistent shortages of skills, materials or tooling

Too much waiting for someone else to act

Too many people coming to work only for the money

Lots of blaming

Where there are problems, they are almost always the product of bad management or bad processes

An important part of MPS implementation is about breaking down these old instincts for delay and inertia. So, if you are the kind of person who thinks they can’t start a DLA process until your KPI definitions are just so, or a new whiteboard arrives from site services, or your boss gives you permission for your DLA kick-off meeting, then Hobhouse has some succinct advice for you: “Just get on with it!”

Her own fondness for have-a-go problem-solving she puts down to a love of maths. “With maths it doesn’t matter if you don’t get it right first time. You can always go back and start again—you know there will be a solution, it’s just a question of finding it. No part of MPS is about waiting for someone to tell you to do something you already

facing an important tender deadline but Procurement is too busy chasing component shortages to provide prices? The result is a disaster for the business with serious consequences for everyone.”

See the processes, not the functions

In breaking down this kind of old-style, silo-based thinking, DLA is more than living up to its promise. Every morning representatives from all business functions come together to focus on what Hobhouse calls the great end-to-end processes. Things like ‘order capture’ and ‘product realisation’. “These, not the functions, are the real muscles of a business,” she says. “Value stream maps help us understand which activities add

bad processes, she says. “You know, every time something goes wrong you can probably say that the root cause is something we managers have failed to do to enable the process to work properly in the first place. Are the induction, assessment, coaching, training or staff development processes working as they should? Or has a problem with the physical process allowed this thing to happen? The Japanese would say it should have been ‘poka-yoked’—made fool-proof—and it’s our job as managers to ensure that happens.”

Beyond production

MPS will, in time, morph into MBS, the Meggitt Business System. That day can’t come soon enough for MAV. “We looked beyond product realisation

almost from the very start. Processes like business capture and product design and certification are already adapting MPS for their own areas. Daily stand-up meetings, living paretos and many other tools besides are being used all over the business.”

The business logic was inescapable. “If we hadn’t tried to get the same thinking right across the whole organisation, then the cultural change wouldn’t have been broad-based enough for MPS to focus on those big, multi-functional, end-to-end processes. We’d have ended up with Production thinking they were badly supported by Engineering and Commercial simply because they were dancing to different beats. By getting everyone thinking along MPS lines as early as possible, it has made it much easier to get DLA and the Focus Factory process delivering results quickly for everyone.” ■