Supply Chain Business Dynamics Changing the Model?

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Gorham PMA & DER Conference

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A Complex Audience

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Richard

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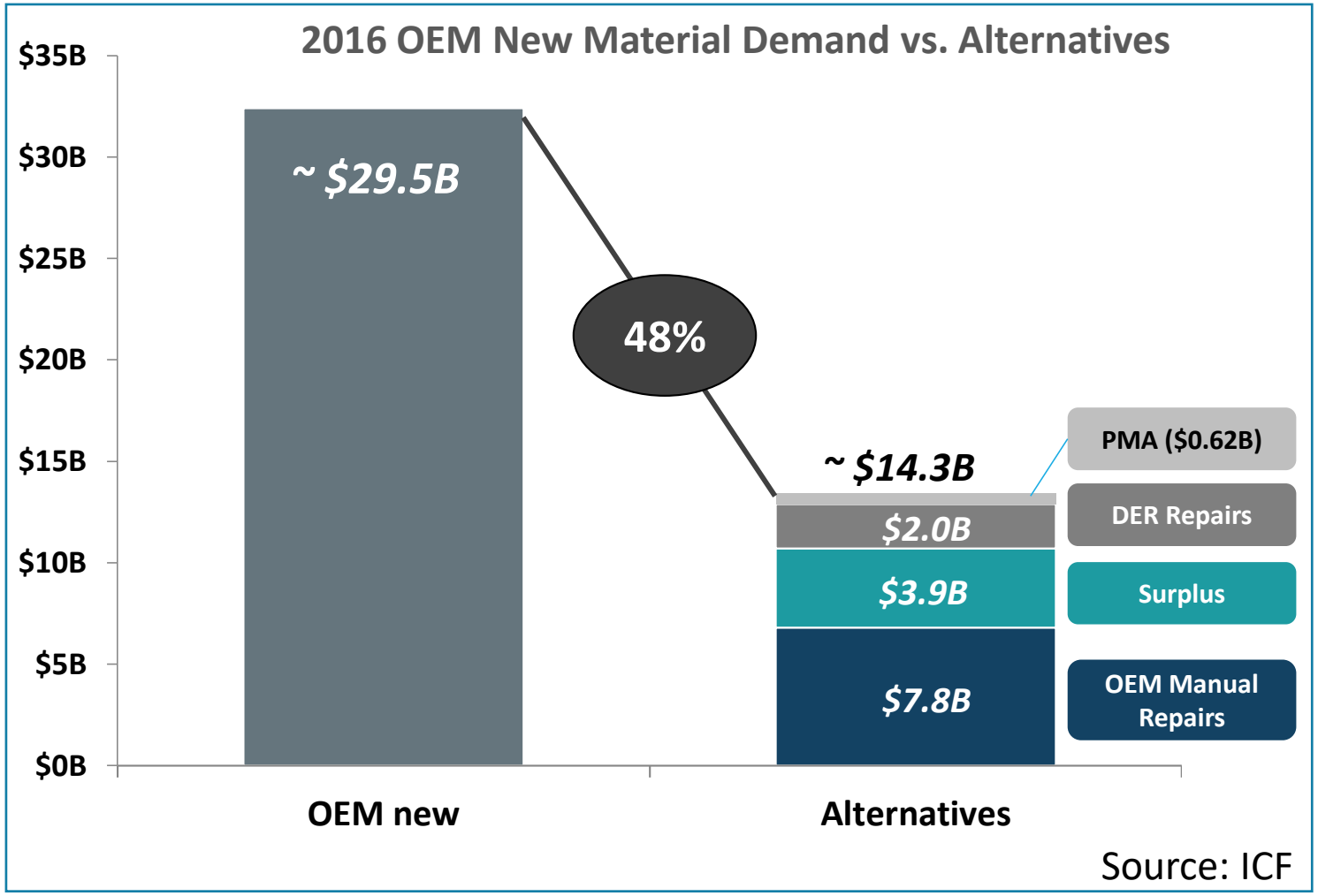
Agenda

- **PMA/DER Market size and trends**
- **Some research feedback**
- **Taking Waste out of the System**
  - Commercial incentives
  - Duplicate effort
  - Robust Solutions
  - Do what you do best
- **Summary**
- **Questions & Answers**

A Growing Market... But



Market Dynamics:

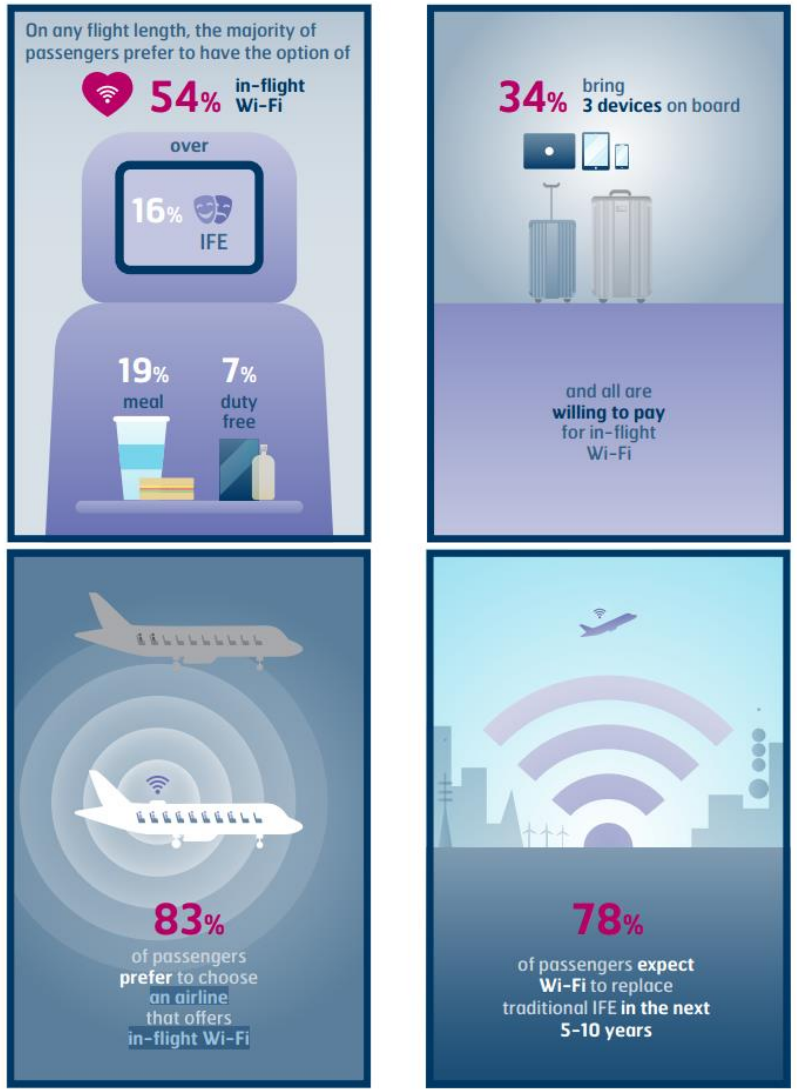
- Continued growth in value and volume
- Lessor restrictions on engine market
- Aircraft OEMs restraining data release

Specific areas of interest:

- PMA candidates for routine maintenance
- PMA for cabin refurbishment
- Growth in DER metallic & composite repair design

How to find areas for profitable development that give added value to our Airline community?

Be Customer-Focused



Source: Inmarsat/aviation 2016

Start with the **true customers "The Passengers"**

1. Choice

They are happy to pay more for a direct flight,
but…also want low cost, possibly less convenient solutions

2. Value for money :

They don't want to feel ripped off, but…
They are prepared to pay more for an overall good deal

3. Reliability

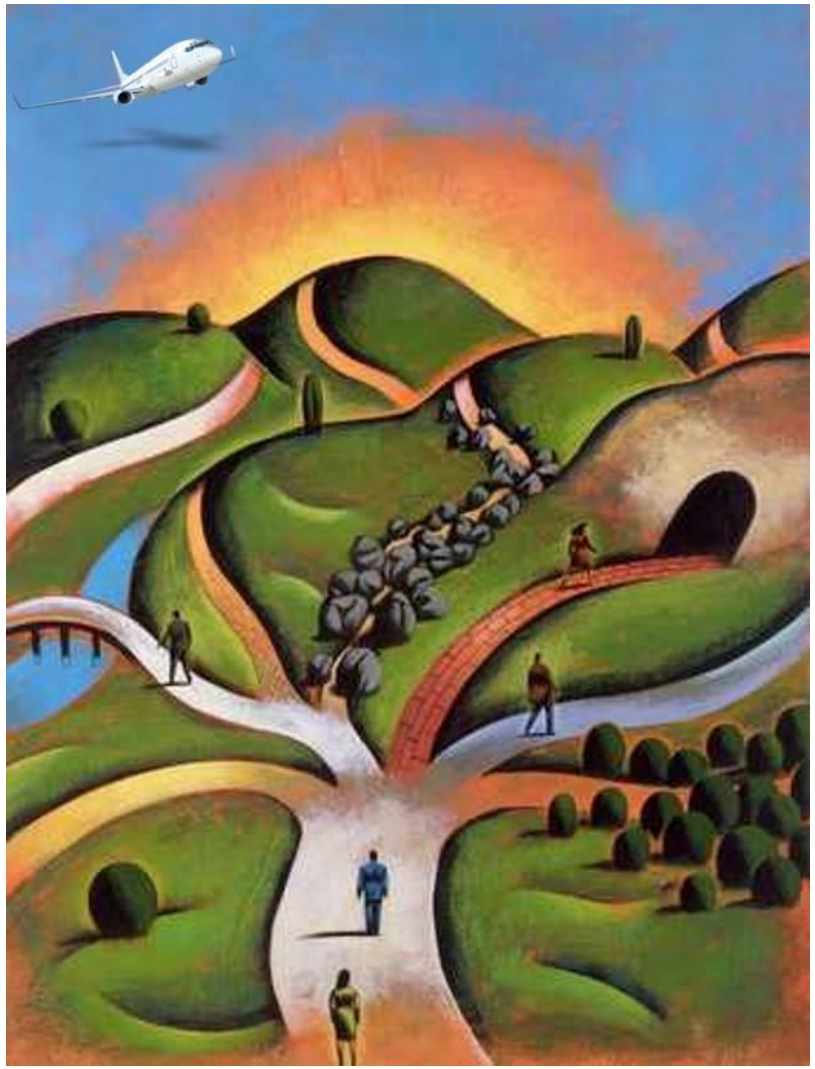
Efficient operations with on-time performance is key.

4. Positive and creative customer service

Nothing worse than an airline that doesn't care

With this in mind, some research... And then some suggestions

Research - PMA Industry Consolidation?



Market Choice

What consolidation over the past 5 years,…
Where do you see it in 5 years from now?

- **The biggest players continue to grow through acquisition…**
  But new companies are springing up…
  And there is room for specialist niche players
- **Acquisitions are often related to broader service offerings**
  The Airlines favour broader solutions to simplify procurement
- **No shift foreseen in this trend over the next 5 years**

PMA will remain small, but is a useful tool and profitable

Research – OEM Defense strategies

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The engine business was aggressively defended by the OEMs. Was this justified? Could the trend be reversed, or will it expand?

- **The way it was described to me is…..**
  The OEMs saw a rising trend of Flight Hour services, and captured the component repair business, including piece parts, as a result, which eliminates the PMA option
- **In addition…**
  A single fleet will have multiple lessors. The complexity of getting agreement across all contracts makes PMA a difficult option.
- **The trend, therefore, is unlikely to reverse, however…**
  Weaker OEMs cause extreme customer irritation, and are still a good target, provided it does not conflict with operating lease terms.

There is ample scope for new business opportunity

Research - PMA Candidates

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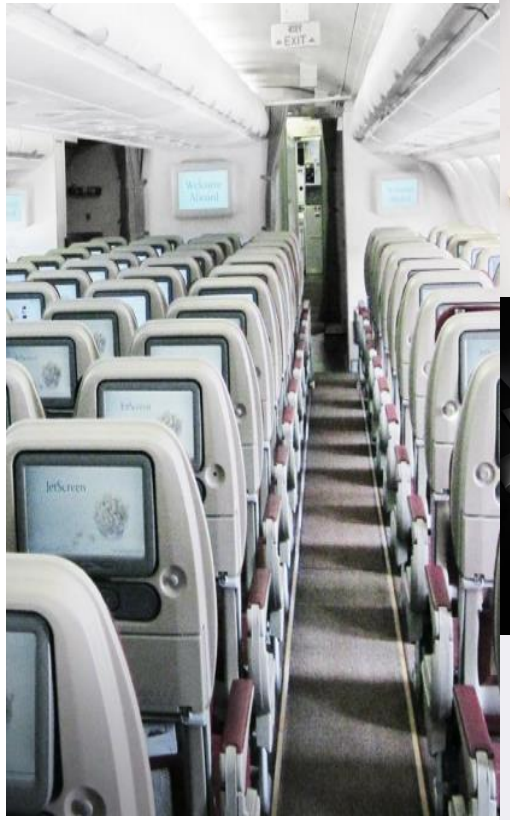

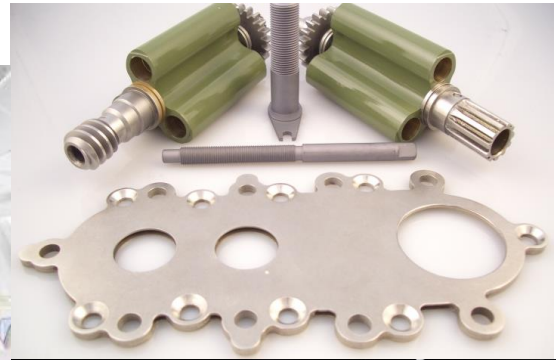

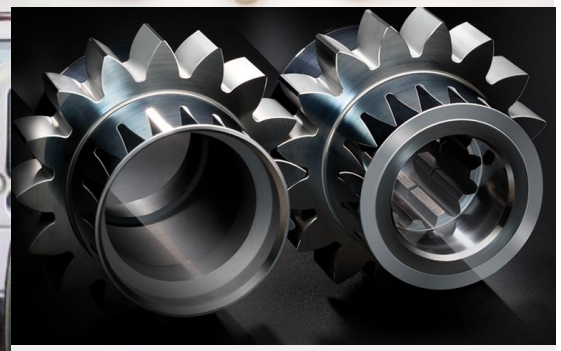

What families of parts show PMA promise for the future and why?

- **Current strategies involve…**
  - Specialist engine and airframe components,
  - The full range of piece parts for MRO of specific LRUs
  - Multiple cabin interior items
- **Avoiding war with the big OEMs helps…**
  - Achieving a broader range of parts in agreement with the OEM may be a way forward
  - OEM selection is key (to partner with, or compete)
- **New Technology should be a factor…**
  - The ability to scan and digitally map a cabin interior for example
  - And 3D printed solutions

Technology is not about to deliver a revolution in PMA capability

Research – Pricing control

How can the industry best control excessive spares pricing?

- **The aircraft and engine manufacturers have to concentrate their efforts on newer aircraft…**
  Smaller, more innovative and agile players can be an effective solution, but…

  They must be driven to ensure that outsource solutions deliver improved pricing and service quality.

- **The Airline Community as a whole has Leverage….** over the manufacturers to drive efficient solutions.
  The Airbus Supplier Support Conditions are an excellent example

- **Simply running RFPs every 18 months is not enough**

Coordinated commercial leverage is required

Research - Game Changers?

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Innovative 3D-printing Technology: Additive Layer Manufacturing

A350 XWB bracket produced with 3D printing

What new technology or future regulation change can facilitate improved customer value for money?

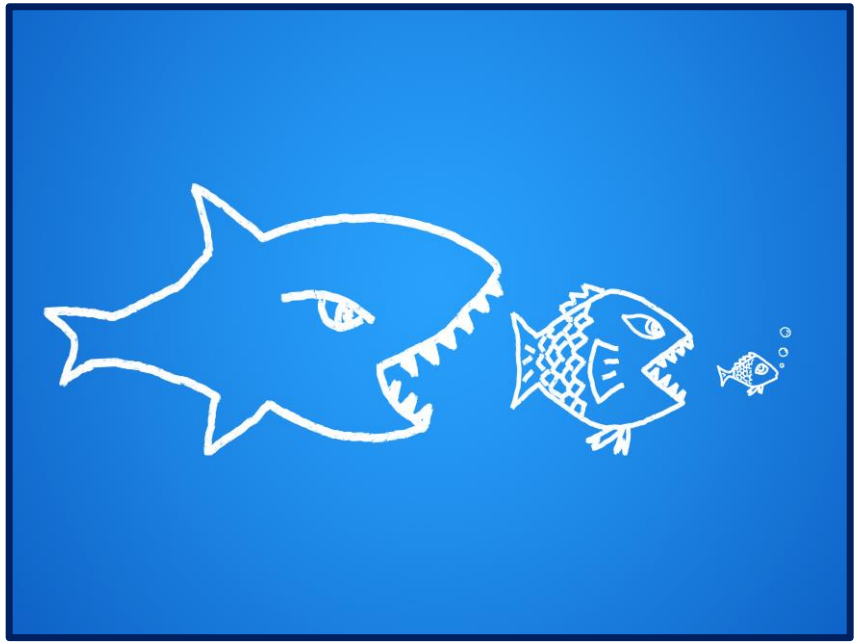
- **No regulation change is anticipated to..**
  - facilitate easier access to data, or
  - simplified certification of parts

In particular, what role for 3D Printing technology?

- **Printing of non flight-safety-critical components will be commonplace:**
  - Replicating old parts with 3D printed prototypes & finished articles: cabin parts (seats; galleys; panels; brackets)
    - → The OEMs are experimenting… but no accepted technology standard OEM budgets are huge compared with others
  - 3D-printed spares on demand to reduce inventory…… Regional 3-D printing centres?

3D printing can provide point solutions… anything bigger must be OEM aligned?

Research – Optimum PMA Strategy



Should PMA form part of a distributor / Broker / MRO Group, or can it stand alone?

The group model is increasingly attractive, especially if it is to deliver a full service without OEM backup.

How is aircraft dismantling affecting this?

All aircraft and engine manufacturers are active in aircraft dismantling, in part to feed their Flight Hour Services. Expect acquisitions?

To which degree will Aircraft and engine manufacturers transfer OOP (out of production parts) to specialized companies?

Boeing has some experience (B717 support / Aviall).
Airbus has Satair and Tarmac.
The OEMs are expanding their channels to market.

All areas of growth.. Take care to avoid the OEMs swallowing all channels to market

PMA / DER Market Goals

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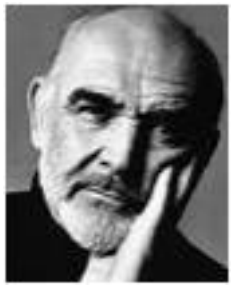
WHY ?

- Profit
- Serving Airline Customers
- Part of a growth strategy



HOW ?

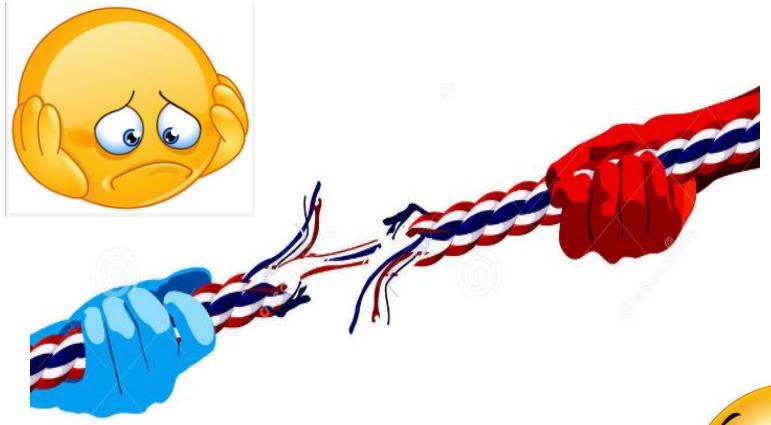
Take out Waste

1. Aligned Commercial incentives
2. Avoid Duplicate effort
3. Robust End User solutions
4. Focussed added value

WHAT ?

- Industry compliant solutions
- Better overall customer value for money

Taking out waste



1. Aligned Commercial Incentives

Make the cost of a repair or a spare a *true cost to minimize*, rather than a revenue opportunity to maximize.

This leads us in the direction of services charged by the hour.

Any solution which forces the supplier to design more reliable components, or cheaper ones, has to be more efficient in the long run.

The PMA community can do this within a broader, value added service offering

Broader services give the supplier more chance to share cost savings

Taking out waste

2. Avoid costly duplicate effort.

Reward PMA re-engineering investment **with sales!**

If a PMA company spends 18 months designing a solution, only to have it rejected because the OEM undercuts the result, where is the incentive to repeat the experience?
The Airline could end up paying more in the long run as suppliers withdraw.

Alternatively, **work with the OEM**

Through Licence PMA. Enabling newcomer to simplify and improve upon the existing supply chain solution.
Been done by Boeing and others, but the resulting price structure is often unsatisfactory.

Avoid constantly chopping and changing

Long term solutions require constant innovation and investment

Taking out waste

3. Ensure Robust Solutions for the User

The cost of a spare part is insignificant compared with the cost of maintenance delay or AOG.
Anything to drive poor suppliers to better performance is key to the health of the overall ecosystem.

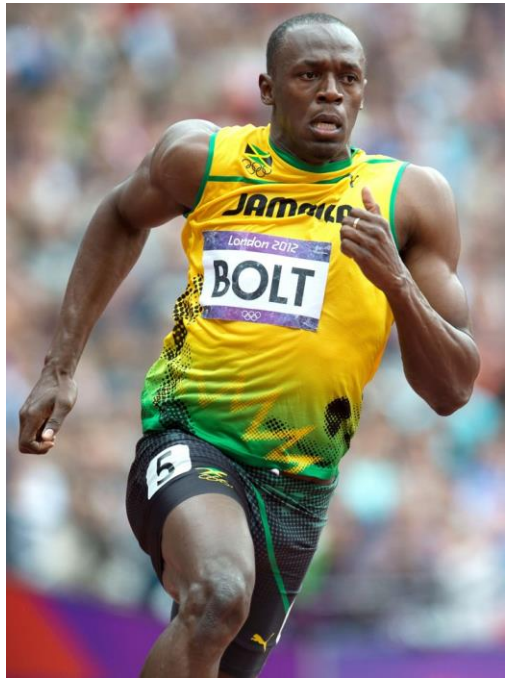
The only way to achieve this is through leverage:

- Threaten not to select the supplier on the next aircraft programme
- Introduce competition in the aftermarket

The Airbus Supplier Rating system, and the Supplier Support Conditions (SSC) are effective tool in this area to force the industry to better overall performance.
[during my time in Safran we were forced to reduce Spares prices by Airbus in line with their global client escalation clause]

New, agile players must be innovative and reliable

Taking out waste



4. Concentrate on what you are best at

Aircraft & engine manufacturers have a vested interest in ensuring new products mature quickly into reliable, best sellers. There seems no sensible place for PMA/DER in the early phase of the aircraft life cycle.

However...There will come a time when margins are eroded, competition is established, obsolescence kicks in....
And there is simply not enough time to concentrate on the old aircraft when new ones are being introduced.

At this point, why not transfer whole aircraft responsibility from the manufacturer to a 3rd party?
The trick is to achieve this and share the efficiencies.
Spares prices should go down, not up……..

New solutions for older products can be the most efficient?

The Ultimate PMA…

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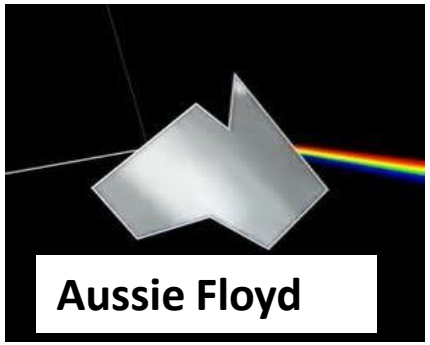
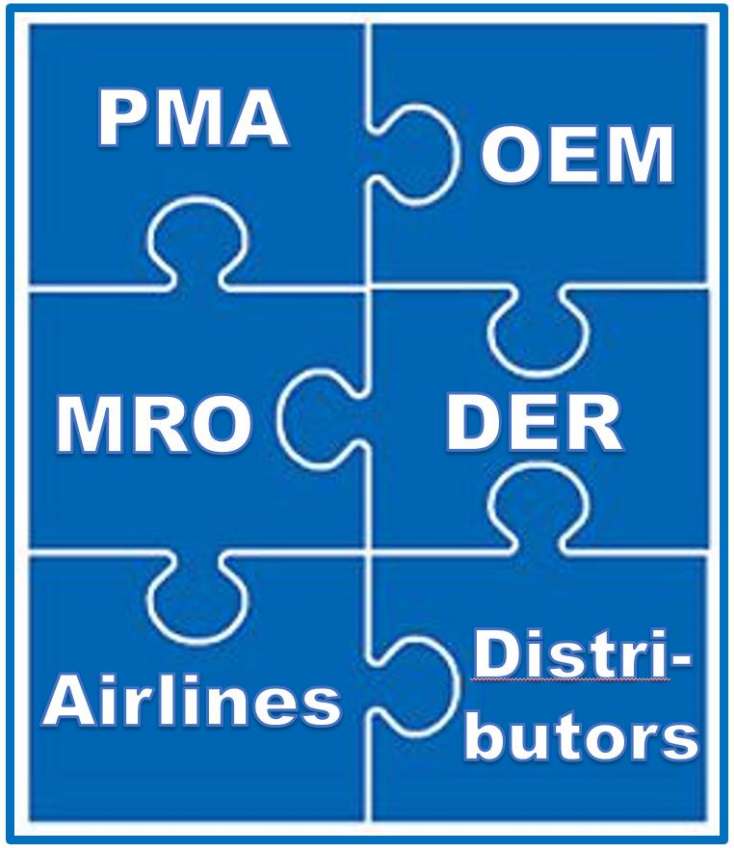
Maximise the value from an older product

The Ultimate PMA…



Maximise the value from an older product

Conclusion



- There is a place for PMA and DER in today's growing market, especially if wrapped into a broader strategy of MRO, distribution and dealing in surplus parts.
- There remain a number of OEMs who are weak in aftermarket support, and who simply do not have the bandwidth to provide decent service to compete with alternative supply chains.
- Airlines have the opportunity to exercise leverage over the Aircraft Manufacturers to ensure that older aircraft types are supported in the most efficient way possible, which can involve transfer of activity to other players.
- Airlines need to avoid using PMA simply as a bargaining chip if they are not serious in using it over the long term.
- Only by eliminating waste can a better solution be driven for the true end user customer.

Thank you!

For further questions, please contact:

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