



MAXIMIZING CREW PRODUCTIVITY

*Combining analytical models
with the reality of under-the-hood
airline business practices*

Presented by:

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Who Am I?

Martin Harrison, Principal at ICF

- **Former COO – *Ground, Tech & Flight Ops* (including ex Head of Crew Planning)**
- **Served in network, LCC, and regional business models**
- **JAA Form 4 Approved Post Holder**



Who is ICF?

- One of the world's largest, most experienced aviation consultancies
 - 52 years in the air transportation industry
 - 85 aviation staff located in 7 offices worldwide, including Hong Kong





AGENDA

- The Challenge
- The Theory
- The Practice

THE CHALLENGE

The Crew Planning Manager is constantly walking the tightrope of too many crews or not enough crews



Too many crews means you are costing too much...

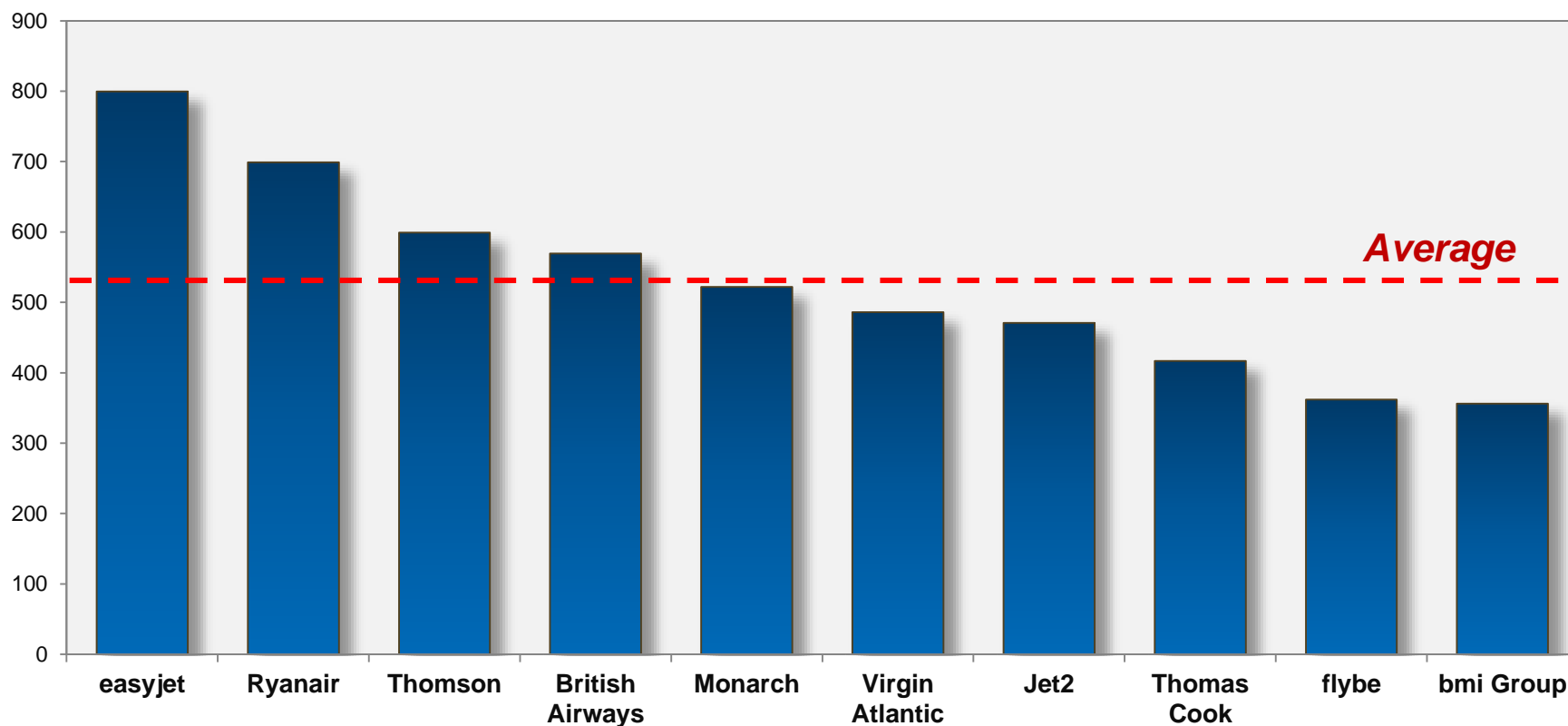
Too many

Too few

...but having too many crews will never get you fired

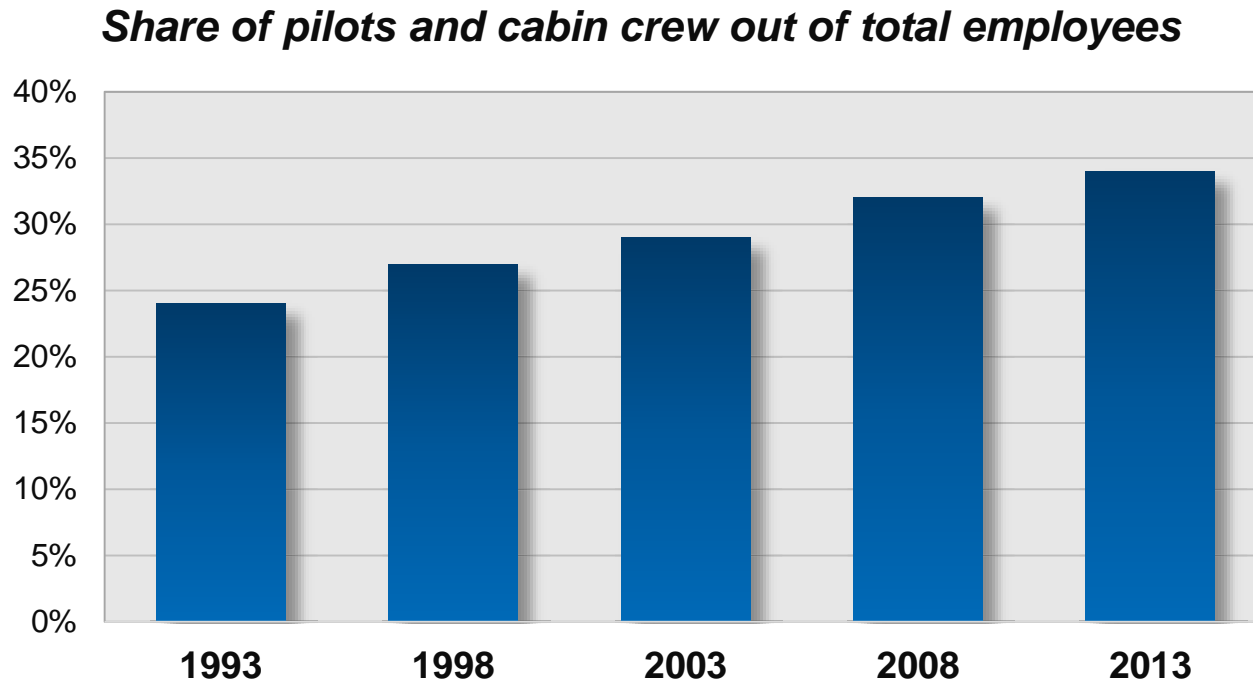
LCCs seem to be more adept at the balancing act


Average flight hours per pilot



Sources: 2012 UK CAA, Ryanair 20-F

Note the industry is seeing an increasing share of airline employees being pilots and cabin crew



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- **Being proficient at managing your crew resource cost is growing ever more important**



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First of all, you have to think about crew related expenses and their different natures

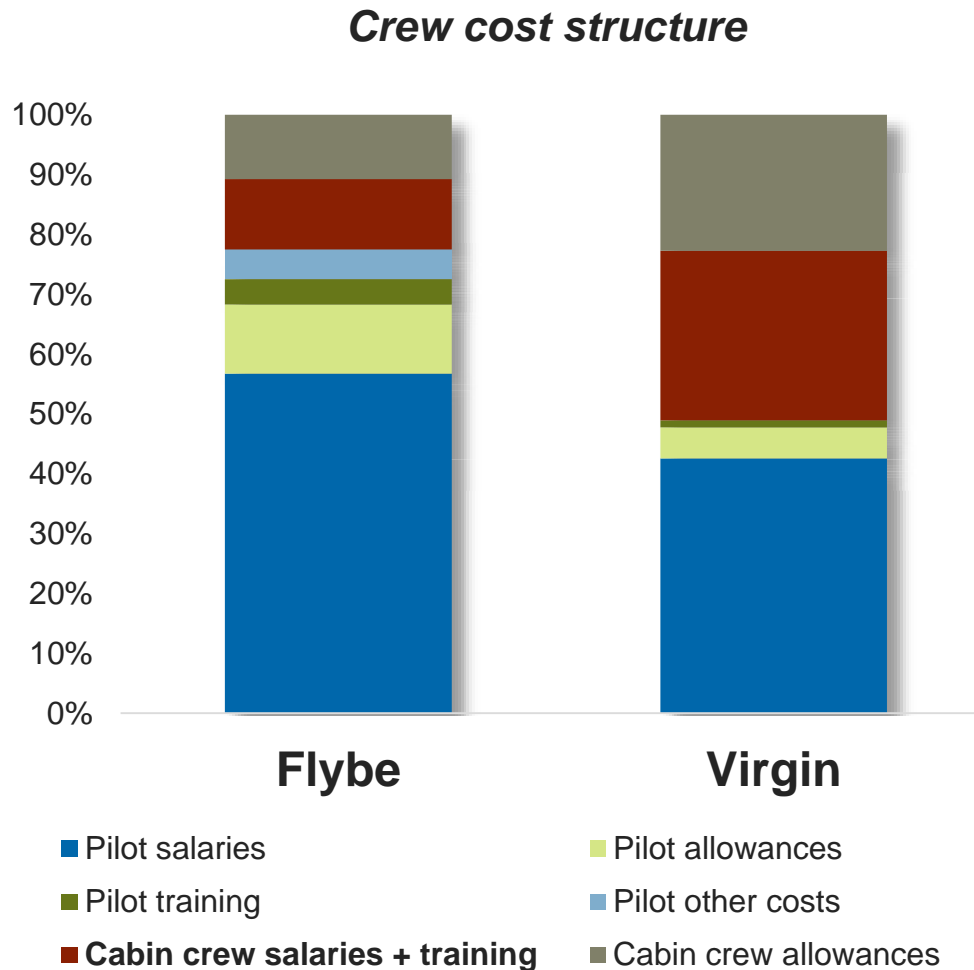
Crew benefits

- Fixed salary
- Variable salary
- Pension
- Insurances (loss of licence, health)
- Flight & duty base allowances
- Temporary allowances

Crew indirect costs

- Hotel
- Ground transport
- Flight positioning
- Training

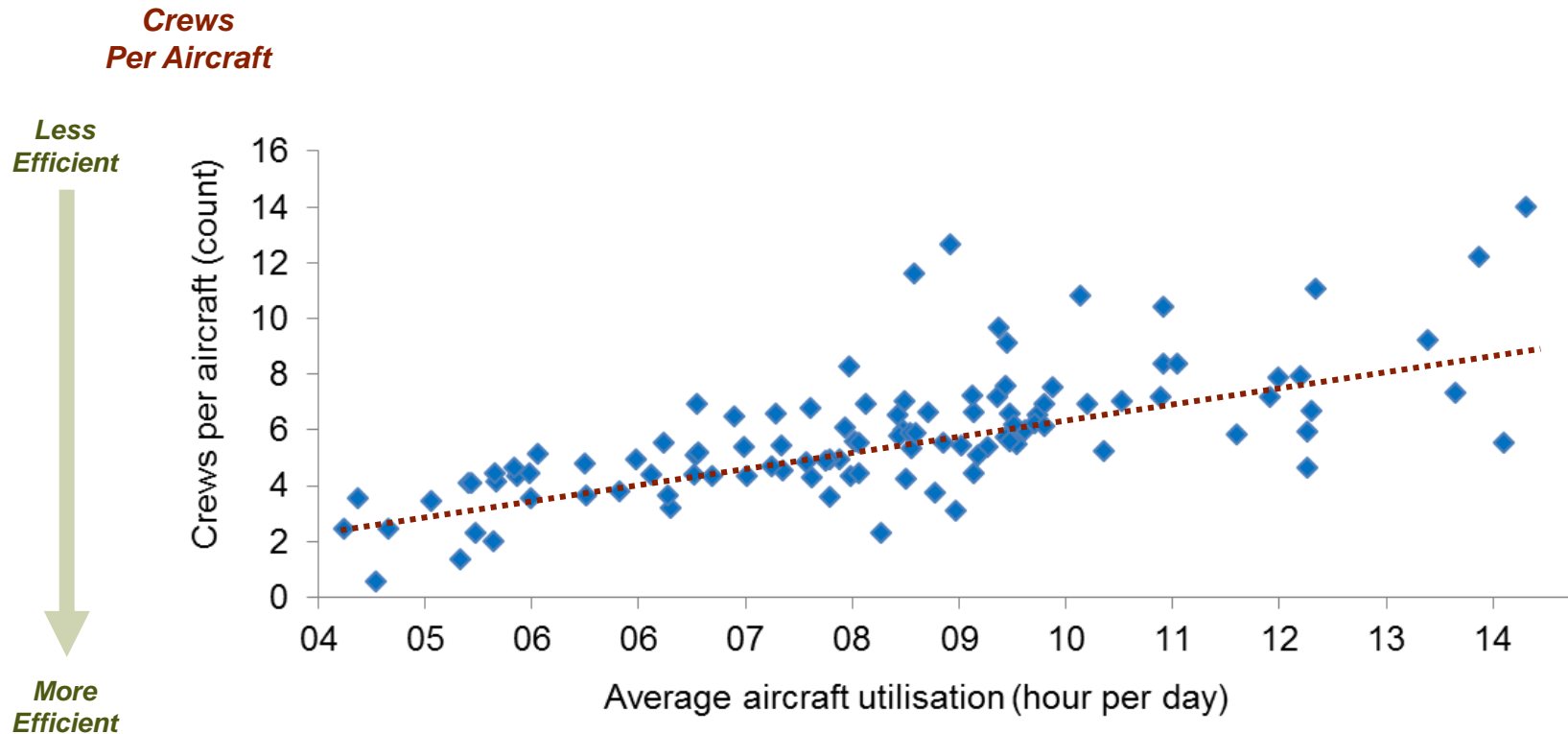
Cost structure depends on the nature of operations



Source> UK CAA, ICF analysis

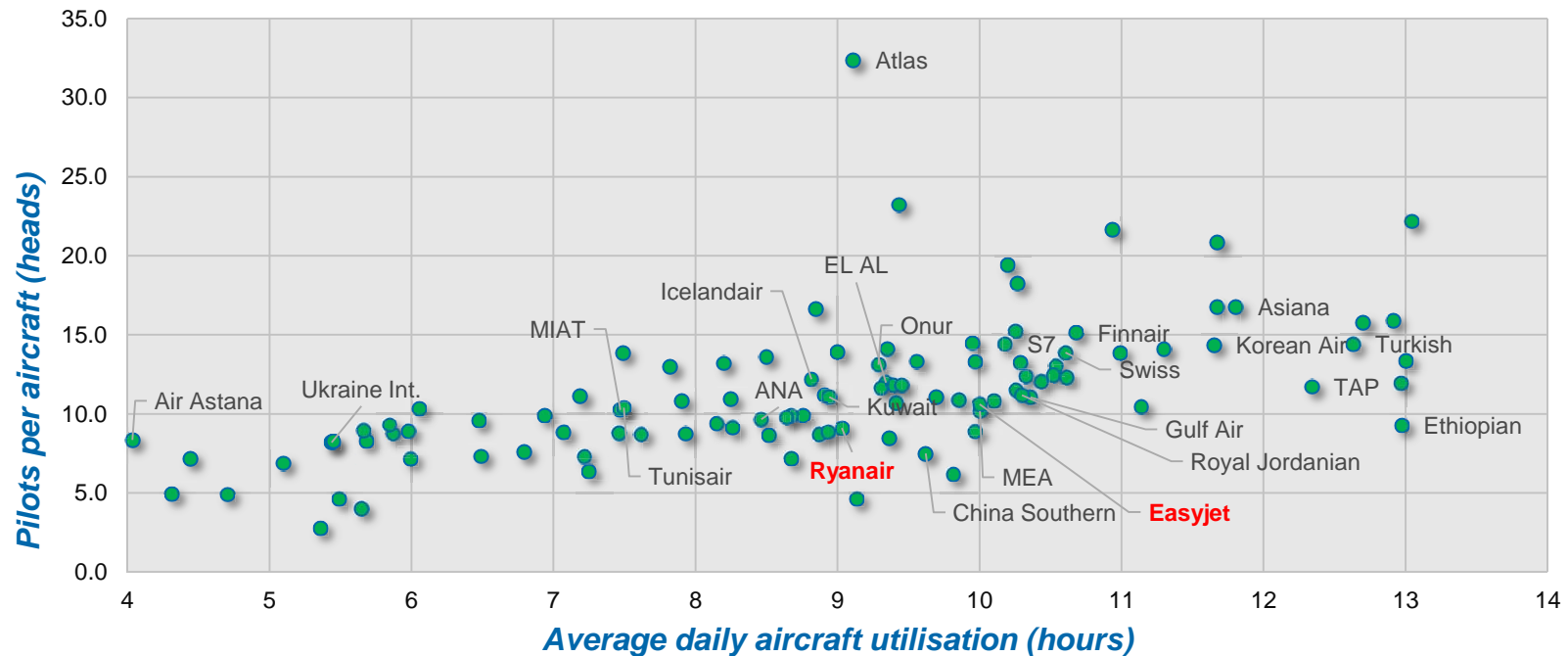
Crew productivity is driven by many factors, but internal Flight Operation's processes have an important impact

Flight Crews per Aircraft vs. Average Daily Utilization



Sources:
• IATA World Air Transport Statistics (WATS); ACAS; Annual reports

Simpler work rules and leaner operations put the LCCs on the lower end of the spectrum in terms of how many crews they need

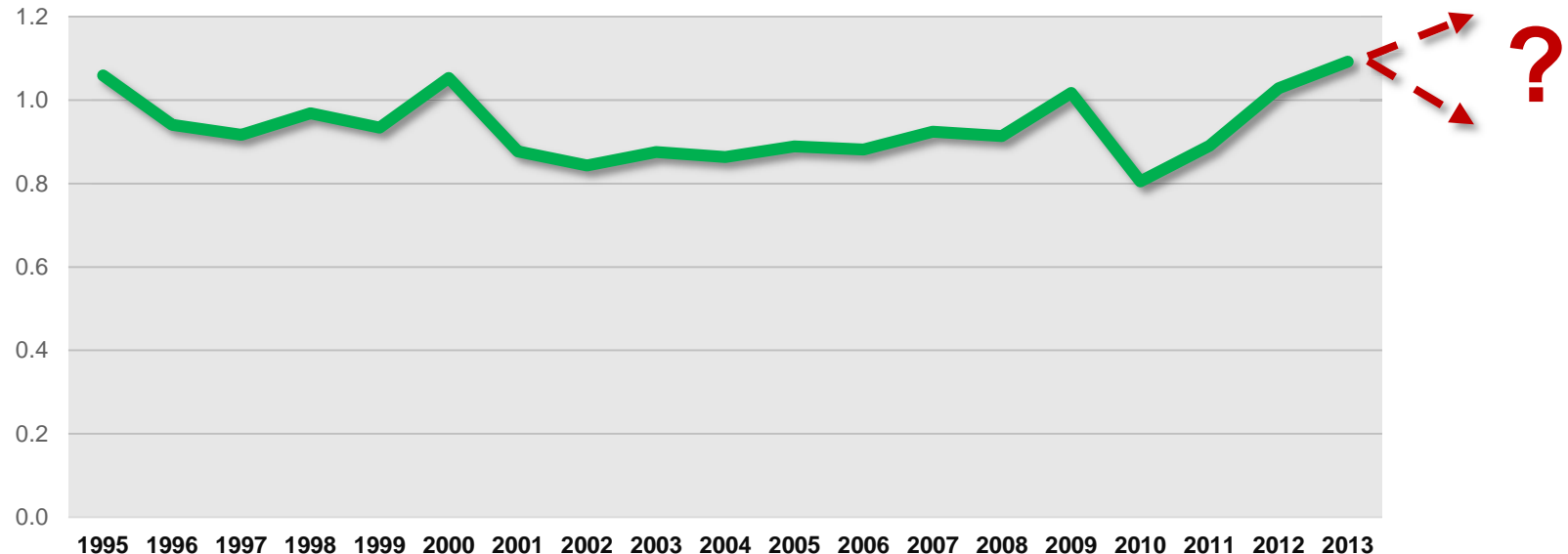



- Their advantage is substantial compared to some legacies
- Even though LCCs tend to operate out of multiple bases

Source: IATA WATS, Easyjet, Ryanair annual reports.

Rule of thumb: more aircraft hours means more crews, but how many more?

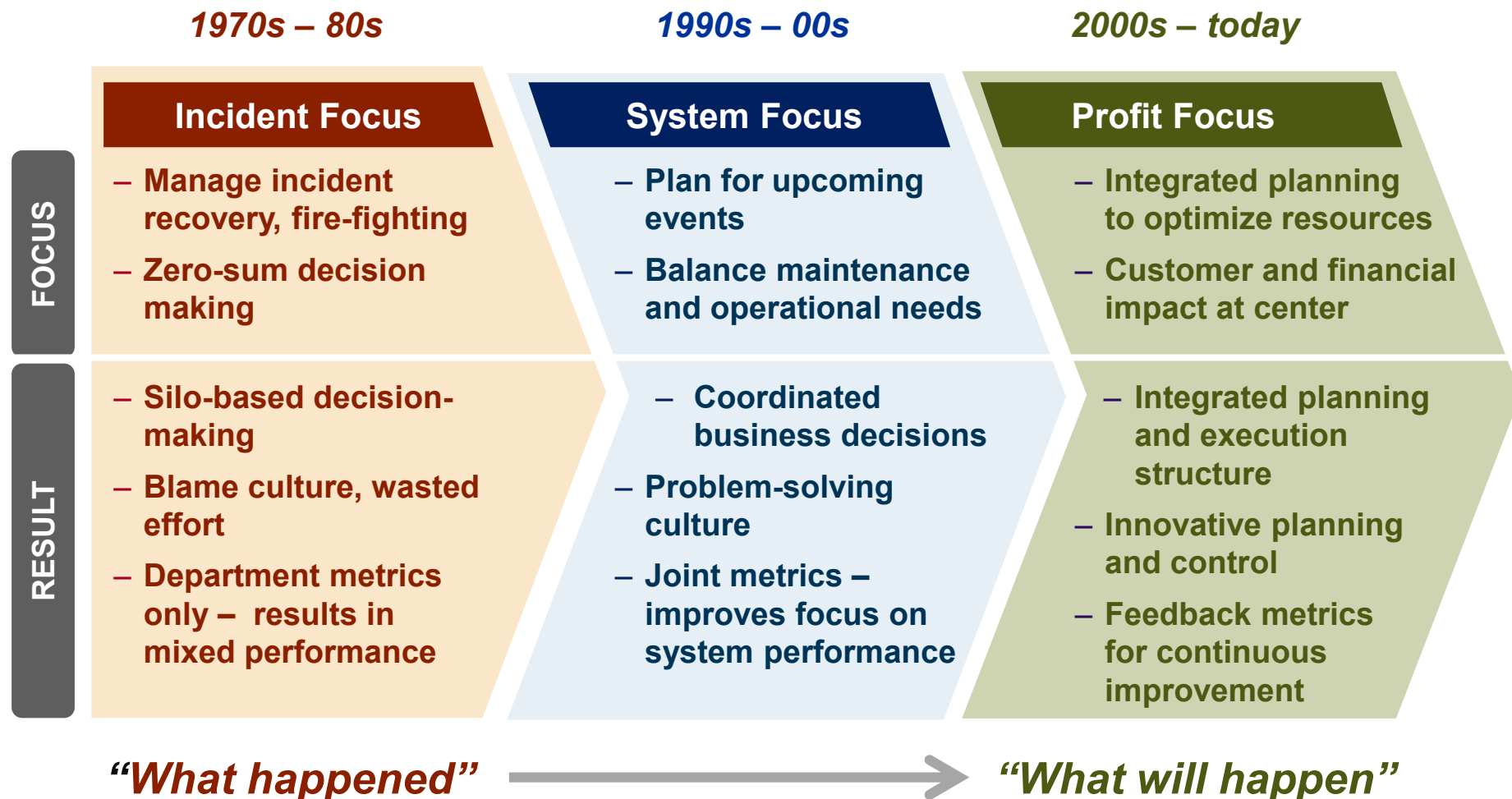
Additional pilots per additional hour of utilisation (heads / hr)



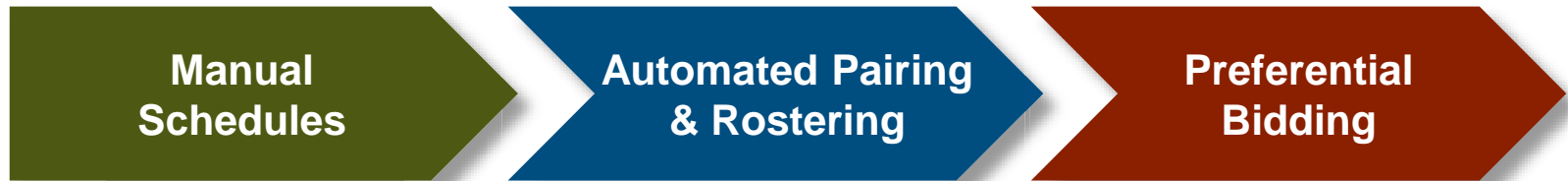
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- In the industry downturns, airlines tend to be able fly more aircraft hours with less pilots
 - As the good times are returning, are we losing that focus?

Source: IATA WATS

Best Practice Operations Planning developed analytical systems and processes to optimize for efficiency and financial impact...



...whereas in **Crew Planning**, the sophistication of systems has often outpaced the effectiveness of implementation



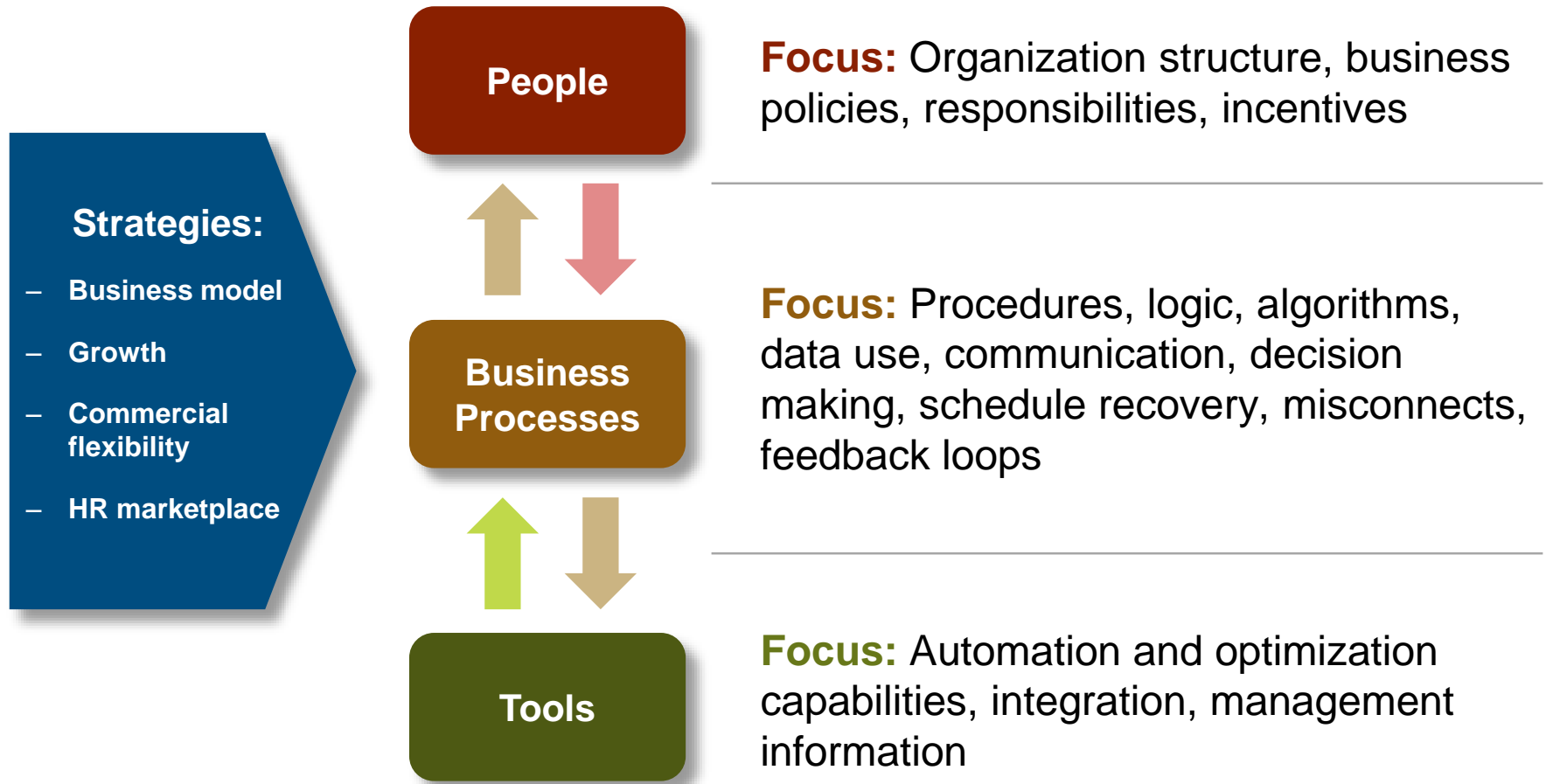
Focus	<i>Comprehensive crew coverage of flight schedule</i>	<i>Complex algorithms geared toward finding efficiencies</i>	<i>Maximizing crew efficiencies with schedule preferences</i>
Outcome	<ul style="list-style-type: none">▪ Labor intensive▪ Time consuming▪ Unrecognized efficiencies	<ul style="list-style-type: none">▪ Improved schedule efficiencies▪ Integrated fleet and crew planning processes	<ul style="list-style-type: none">▪ Optimized schedules based on commercial needs and crew preferences
Risks	Weak Optimization	Weak Calibration	Weak Strategy



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Three Organizational Considerations



Crew efficiencies typically slip at four points (in my experience)

1

The classic ops vs. commercial tussle

2

Something optimised vs. something resilient

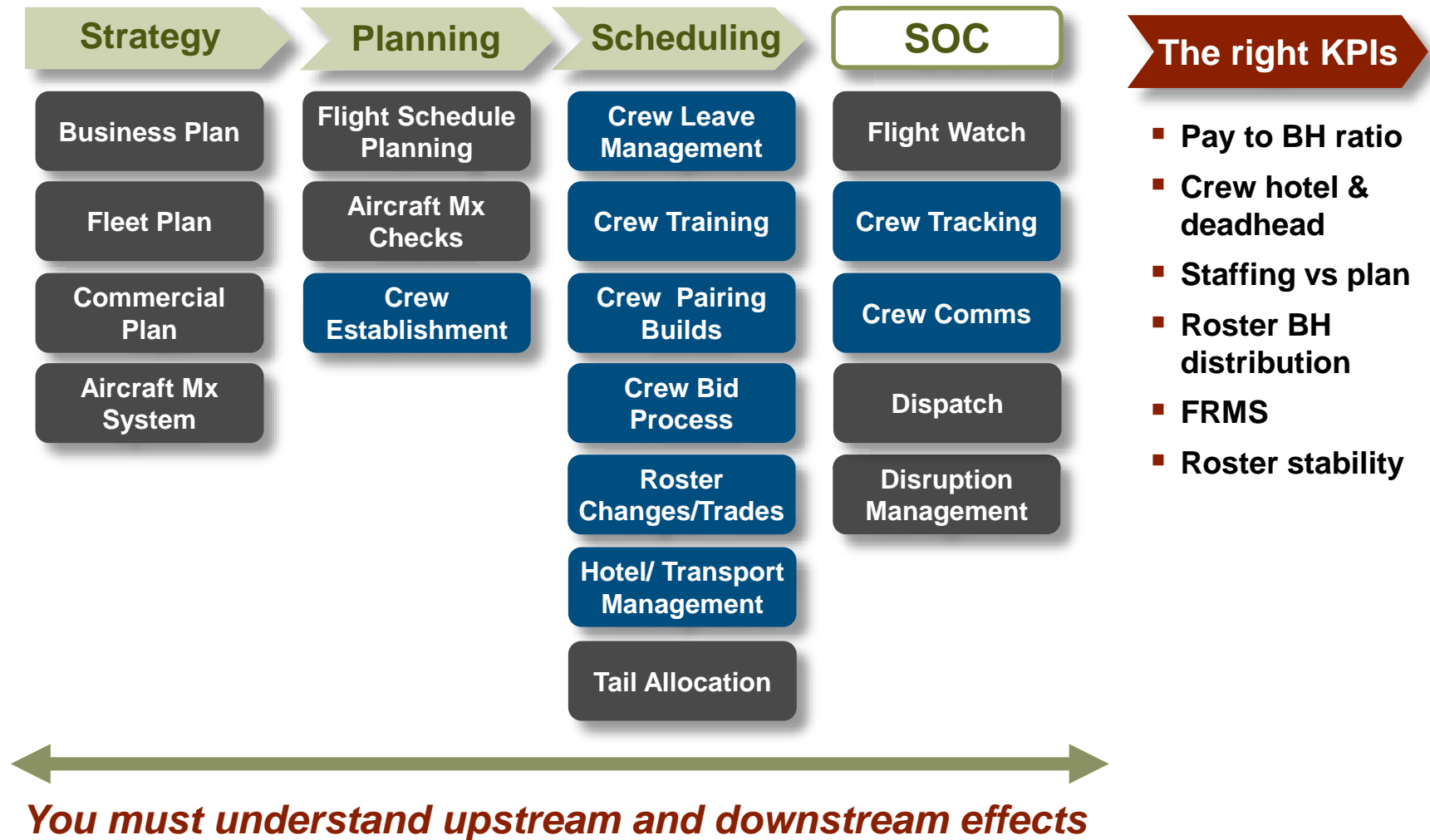
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The tightrope bias as mentioned before

4

These are real people (yes, they have feelings, they need rest and they are in demand)

An airline need routine, comprehensive assessment



Key: Other functions Crew Planning

And finally, as one can learn from LCCs, often simple is best...



Thank you!

*For questions regarding
this presentation, please contact:*

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