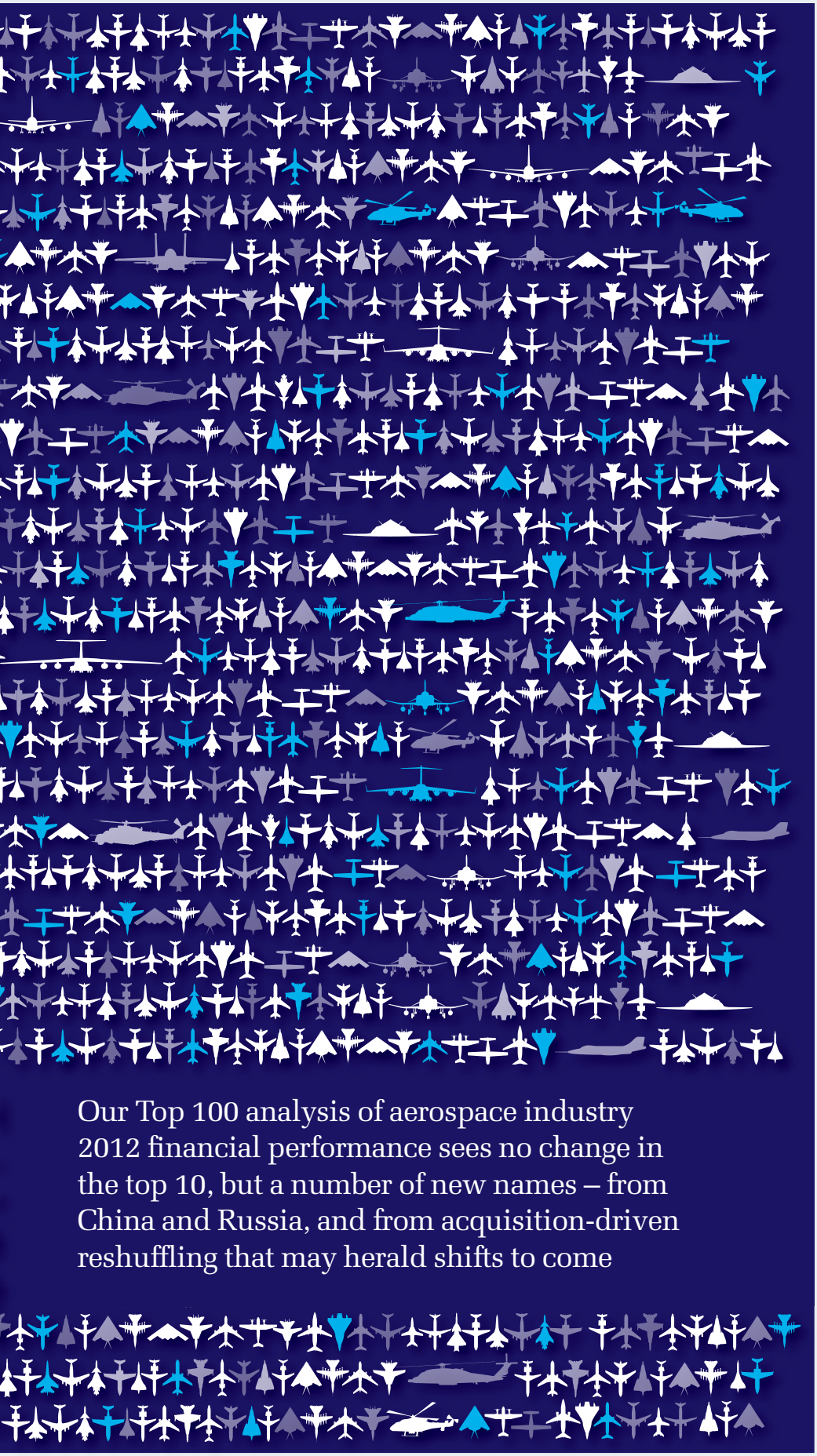
TOP 100



Our Top 100 analysis of aerospace industry 2012 financial performance sees no change in the top 10, but a number of new names – from China and Russia, and from acquisition-driven reshuffling that may herald shifts to come

DAN THISDELL LONDON

For several years since the financial crisis struck in 2008, merger and acquisition activity has been relatively subdued. That's not surprising given the economic backdrop, but the assumption has prevailed that the aerospace industry is ripe for consolidation, especially in terms of the supply chain.

However, as shown by our latest Top 100 analysis of industry leaders – compiled, as ever by the experts at PwC – 2012 was in fact a year of buoyant deal activity. Boeing, for example, completed acquisitions totalling $124 million and Lockheed Martin splashed out $304 million. Smaller companies were also highly active. Indications from the wider corporate world suggest that, in recent months, the M&A market is finally loosening up. With companies sitting on large cash piles after several years of record profits, aerospace could well be in for a flood of dealmaking.

Next year's Top 100 may, then, look quite different. Watch, especially, for companies with heavy exposure to military budgets in North America and Europe look to M&A for diversification, into civil aerospace as well as related-technology fields like cybersecurity.

However the industry shakes out, though, one fact shines through this Top 100 analysis; profitability is strong and settling down at a level above historical norms. With aviation growing consistently faster than the global economy, good times in aerospace look likely to continue for the foreseeable future.■

To view our full list of the Top 100 aerospace companies, including revenue and profit figures, visit **flightglobal.com/top100**

Boeing

At number-one Boeing, 787 production is starting to hum

1 BOEING

Revenue: **$81.7 billion**
Profit: **$6.31 billion**
The world's biggest aerospace company got a lot bigger in 2012 – revenue grew 18.9% on 36% growth in airliner sales

2 EADS

Revenue: **$74.8 billion**
Profit: **$2.82 billion**
At 15%, revenue growth was strong, and profitability was also on the up. A year from now the group will be called Airbus

3 LOCKHEED MARTIN

Revenue: **$47.2 billion**
Profit: **$4.43 billion**
As a very defence-focused business homed in a budget-slimming USA, it is no surprise sales were up just 1.5%

5 UNITED TECHNOLOGIES

Revenue: **$29.1 billion**
Profit: **$3.25 billion**
The Pratt & Whitney and Sikorsky parent grew 17.2% due in large part to its acquisition of Goodrich, ranked 18th in 2011

4 GENERAL DYNAMICS

Revenue: **$31.5 billion**
Profit: **$833 million**
Sales dipped by 3.6% in 2012, which is no surprise given GD's heavy exposure to US military budgets. Total revenue is on track for negative growth again this year, but the business jet market is another story – in the half to end-June 2013, orders were taken for every Gulfstream model, and aerospace segment sales gained nearly a fifth

Billypix

G650: business end of a good business

6 NORTHROP GRUMMAN

Revenue: **$28.1 billion**
Profit: **$2.83 billion**
Growth of 6.6% reversed a fall in 2011; first half 2013 sales were flat, and the backlog dipped with US federal spending

7 RAYTHEON

Revenue: **$24.4 billion**
Profit: **$2.99 billion**
Another heavyweight with big exposure to defence budgets, sales dipped 1.5% in 2012; the forecast is -3% this year

9 GENERAL ELECTRIC

Revenue: **$20.0 billion**
Profit: **$3.75 billion**
A solid performer that may be set for a surge; Avio engines acquisition will show in 2013, and structures is a rising star

10 SAFRAN

Revenue: **$15.9 billion**
Profit: **$1.92 billion**
Systematic innovation and a solid drive into security complement long-term success of CFM venture with GE

11 ROLLS-ROYCE +3

Revenue: **$13.7 billion**
Profit: **$1.75 billion**
Double-digit sales growth may well continue owing to strong positions on 787 and A350

8 FINMECCANICA

Revenue: **$20.2 billion**
Loss: **$192 million**
The Italian industrial champion saw sales edge down nearly 2%, but it slashed aerospace losses from $2.22 billion to less than a tenth of that. The result was a relief after a miserable 2011, when a €753 million ($998 million) charge against faulty aerostructures it supplies to the Boeing 787 helped spark a major, and ongoing, corporate restructuring. Aerospace sales are still trending downward, but the AgustaWestland helicopters business looks to be on a roll despite an exports to India corruption probe that has cost management scalps

AgustaWestland is a star

Augusta Westland

12 HONEYWELL +1

Revenue: **$12.0 billion**
Profit: **$2.28 billion**
With its operating margin of 15.6%, the fuel to component systems group is by far the most profitable of the big players

13 L-3 +4

Revenue: **$11.8 billion**
Profit: **$1.27 billion**
Sales edged up 1.8% in 2012; first-half gains were slimmer this year, but new contract signings are encouraging

14 TEXTRON +1

Revenue: **$9.12 billion**
Profit: **$853 million**
For the Bell helicopters and Cessna business jets maker, 8.8% growth shows return to stability after tough few years

15 BAE SYSTEMS +1

Revenue: **$8.73 billion**
Profit: **not available**
Heavy exposure to US and UK military sales keeps life interesting at BAE, but the UK arm of the Eurofighter consortium leads the lucrative Saudi Arabia export deal

The Eurofighter is a major focus for BAE

Geoffrey Lee Eurofighter

16 BOMBARDIER +3

Revenue: **$8.63 billion**
Profit: **$382 million**
Sales growth was barely positive and profit meagre, but in CSeries and Global range, 2012 was marked by investment

18 THALES -6

Revenue: **$5.83 billion**
Profit: **$393 million**
Profitability remains a concern at the Paris-headquartered avionics and electronic systems group

20 PRECISION CASTPARTS +3

Revenue: **$5.47 billion**
Profit: **not available**
The Portland, Oregon-based maker of structural castings and aerostructures racked up 22.5% revenue growth

17 EMBRAER -6

Revenue: **$6.18 billion**
Profit: **$612 million**
Brazil's champion slipped down the table, but sales of its regional jets have been strong and some analysts are expecting a re-engined E-Jets range to propel Embraer into the lead in that market, despite new competition from China and Japan

For short-haul efficiency, E is the way...

Embraer

19 MITSUBISHI HEAVY INDUSTRIES +1

Revenue: **$5.53 billion**
Profit: **$331 million**
Heavy may seem like the wrong name for a regional jet maker, but the in-development MRJ programme is serious business

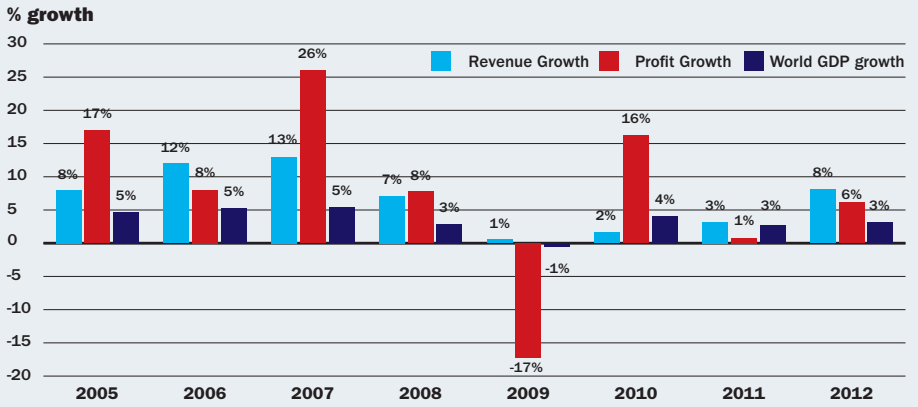
...unless, of course, you prefer the big M

Mitsubishi Heavy Industries

TOP 100

As the chart on the right shows, the aerospace industry's leading players appear to have returned to a sales and profit performance pattern which bears at least some similarity to the pre-crisis boom years of the mid-2000s. At 8%, sales growth has returned to a level that might be described as robust – if not buoyant – and remains considerably higher than global GDP growth, which with any luck will remain an industry characteristic. While the 6% gain in profits is an average which hides some negative outcomes, the average profit margin is settling at around 9.4% – higher than in the 2000s, and suggesting that companies are working smarter post-crisis.

REVENUE AND PROFIT GROWTH OF THE AEROSPACE TOP 100 2005-2012



SOURCE: PwC

Billypix

The Paris air show was a hotbed of industry activity this year, with big-money deals changing hands and orders fleshed out

TOP 20 BY OPERATING MARGIN 2012

Rank by margin	Rank by sales	Company	Operating margin
1	48	TransDigm Group Incorporated	41.2%
2	86	FLIR Systems	32.9%
3	44	B/E Aerospace	25.9%
4	95	Garmin	25.0%
5	26	Harris	24.1%
6	96	Martin Baker	23.7%
7	33	Hindustan Aeronautics	23.4%
8	76	Crane	22.2%
9	39	Meggitt	20.2%
10	12	Honeywell International	18.9%
11	9	General Electric	18.7%
12	65	Heico	18.2%
13	23	Rockwell Collins	18.2%
14	68	Cytec	17.8%
15	31	Alliant Techsystems	16.6%
16	59	Ultra Electronics	16.1%
17	83	Kaman	15.3%
18	67	MDA communications	15.1%
19	66	Woodward Governor	14.5%
20	74	Senior	14.5%

SOURCE: PwC

TOP 20 BY SALES GROWTH (%)

Rank by Growth %	Rank by sales		Sales growth (%)
1	89	Elettronica	64.8%
2	71	LISI	45.0%
3	48	TransDigm Group	41.0%
4	37	AVIC	26.6%
5	24	Zodiac	25.8%
6	74	Senior	23.0%
7	20	Precision Castparts	22.5%
8	92	Doncasters	20.6%
9	87	Asco	19.7%
10	100	Circor International	19.7%
11	55	Korea Aerospace Industries	19.3%
12	22	Dassault Aviation	19.2%
13	1	Boeing	18.9%
14	65	Heico	17.3%
15	5	United Technologies	17.2%
16	68	Cytec	17.0%
17	85	SKF	17.0%
18	32	Avio	16.1%
19	46	Esterline	15.9%
20	35	Kawasaki Heavy Industries	15.8%

SOURCE: PwC

21 SPIRIT AEROSYSTEMS

Revenue: **$5.40 billion**
Profit: **$114 million**
Sales growth in 2012 of 11% was fair, but profits were grim and 2013 has seen layoffs and site closures

22 DASSAULT AVIATION +2

Revenue: **$5.22 billion**
Profit: **$725 million**
Dassault Aviation is ever a story of two parts. Its Falcon business jets sit in the big-cabin market sector that has fared well through the downturn, but the product range is under pressure from newer, faster, longer-range rivals. India's choice of Rafale fighters was an export sales triumph – or will be if and when Paris and New Delhi seal the deal

7X is the business, but Dassault's flagship is under pressure
DassaultAviation

24 ZODIAC +3

Revenue: **$4.56 billion**
Profit: **$646 million**
At 25.8%, the Paris-based seats and galleys maker is a Top 100 growth star; 787 programme will be a cash cow

25 MTU AERO ENGINES +1

Revenue: **$4.48 billion**
Profit: **$397 million**
MTU is part of the V2500 narrowbody power alliance and its successor, along with P&W and Rolls-Royce

23 ROCKWELL COLLINS -1

Revenue: **$4.73 billion**
Profit: **$859 million**
Sales edged down 1.7%, so much rides on civil business, but strength in communications systems mean retrofit prospects and a good chance of riding out US defence cuts

For pilots, it's Collins every step of the way
Gulfstream

26 HARRIS -1

Revenue: **$3.99 billion**
Profit: **$960 million**
Secure communications systems, including for air traffic control

27 ISHIKAWAJIMA-HARIMA +5

Revenue: **$3.85 billion**
Profit: **$176 million**
Sales growth of 13% for the maker of CF34 and V2500 engine components

28 ALCOA +3

Revenue: **$3.80 billion**
Profit: **not available**
The US aluminium giant saw new alloys keeping it competitive with carbonfibre

29 TRIUMPH +1

Revenue: **$3.70 billion**
Profit: **$531 million**
After 2011's $1.44 billion acquisition of Vought made for 44% growth, Triumph had to make do with 8.7% organically

30 ISRAEL AEROSPACE -1

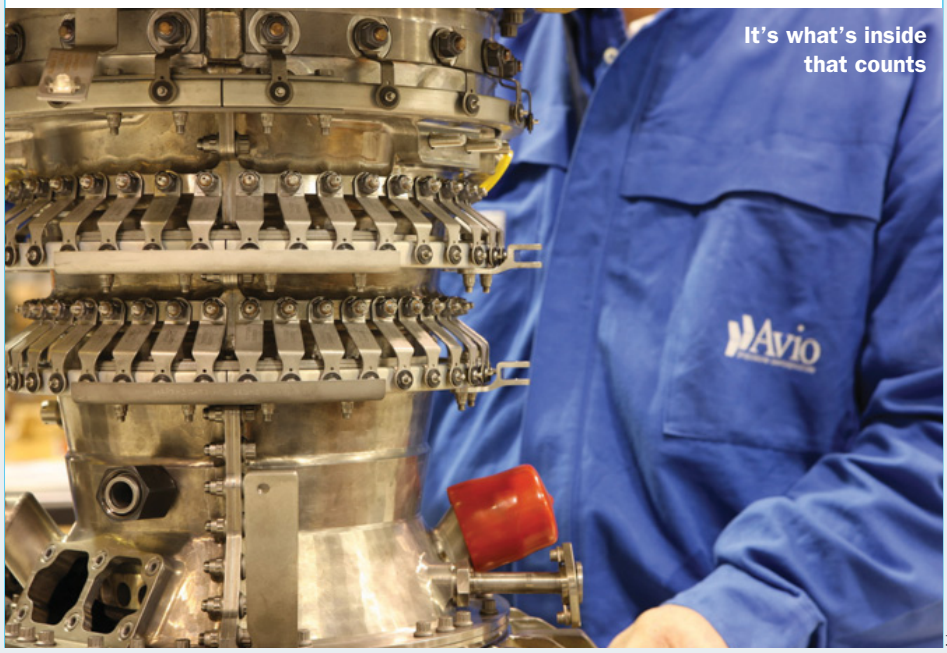
Revenue: **$3.40 billion**
Profit: **$78 million**
The Israeli defence manufacturer managed 3% growth but should be in a good position to grow export sales

31 ALLIANT TECHSYSTEMS -3

Revenue: **$3.21 billion**
Profit: **$532 million**
Sales down 11.2%; solid rocket propulsion, armaments, aerostructures

32 AVIO +5

Revenue: **$3.12 billion**
Profit: **$291 million**
The Italian engine components maker's private equity owners had been lining the company up for an IPO, but instead sealed a $4.3 billion deal that saw it go to GE in a trade sale earlier this year – GE's numbers will rise accordingly when 2013's figures come through



It's what's inside that counts

Avio

33 HINDUSTAN AERO +2

Revenue: **$3.10 billion**
Profit: **$725 million**
HAL is slowly, and very partially, being freed from New Delhi's ownership

34 ELBIT SYSTEMS +2

Revenue: **$2.89 billion**
Profit: **$203 million**
The Israeli defence electronics maker is growing sales beyond the US and Israel

35 KAWASAKI HEAVY INDUSTRIES +6

Revenue: **$2.75 billion**
Profit: **$169 million**
A long-time key structures partner for Boeing, also serves Embraer

Joint Strike Fighter

Lockheed Martin

36 COBHAM -2

Revenue: **$2.70 billion**
Profit: **$364 million**
Revenue dipped for the second year running, down 5.7% in 2012, but the business is well diversified into services

37 AVIC new

Revenue: **$2.66 billion**
Profit: **$201 million**
At last, reliable financial reports are bringing China into the Top 100; AVIC even makes the top 10 for growth

39 MEGGITT +4

Revenue: **$2.48 billion**
Profit: **$500 million**
The systems maker has this year moved into a new management era, with the retirement of popular boss Terry Twigger

38 EXELIS

Revenue: **$2.60 billion**
Profit: **not available**
The former ITT aerospace business now sits alone – and has dropped the ITT from its name. Products include command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) systems and information and technical services. The company supplies military, government and commercial customers in the USA and globally; Exelis also supplies aerostructures to Airbus, Boeing and Sikorsky

Exelis inside

Senior Airman Dennis Sloan, USAF

40 GKN +2

A380 wings, GKN manufacturing

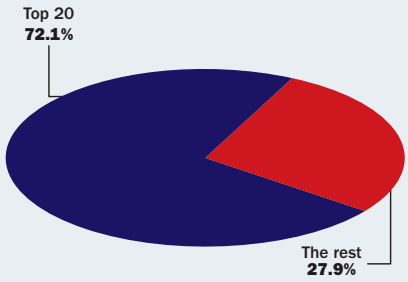
Kevin Jackson

Revenue: **$2.45 billion**
Profit: **$273 million**
This British industrial champion may be best known as one of Airbus's key suppliers – it now owns the OEM's wing components plant at Filton, from where it supplies spars and critical structures for A380, A350 and A400M – but it also has solid positions on Boeing programmes including 787. With its 2012 acquisition of Volvo Aero, GKN is now one of the world's leading engine components makers. Composite technology is a particular strong suit, and GKN also sits comfortably on the defence side of the business, with positions on major platforms that leave it relatively unaffected by military spending cuts. On top of all that, the aerospace division has been a growth star and is finally closing in on GKN's biggest unit, automotive driveline

Eurocopter EC225

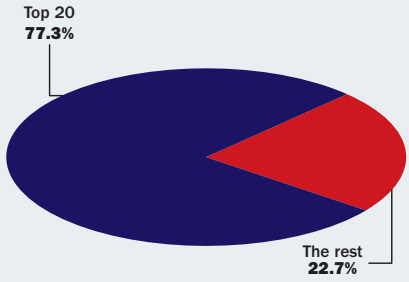
Nobuo Ojama

TOP 20 SHARE OF TOP 100 PROFITS 2012



SOURCE: PwC

TOP 20 SHARE OF TOP 100 SALES 2012

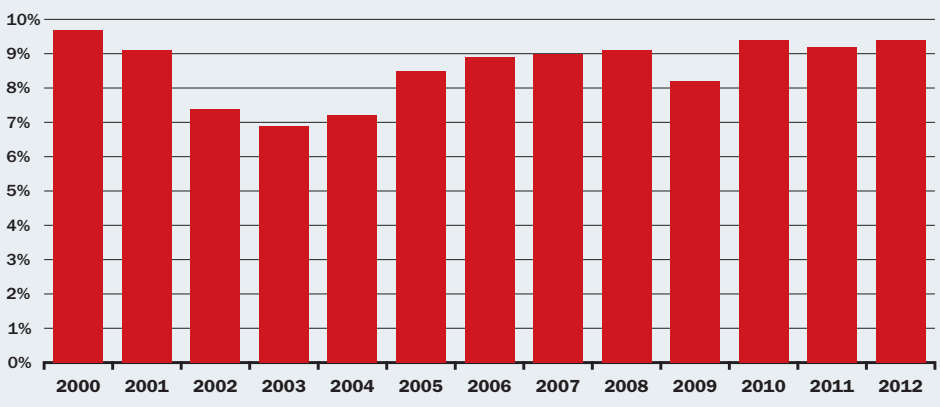


SOURCE: PwC

ANA helped open the 787 era

Boeing

AVERAGE TOP 100 OPERATING MARGIN 2000-2012



SOURCE: PwC

A400M: shower of expectations

S Ramadier Airbus Military

45 CAE

+2

So real, you don't need to leave the ground

CAE

Revenue: **$2.04 billion**
Profit: **$239 million**
One of Canada's aerospace industry stars, CAE is a world leader in full-motion simulators, as well as a major provider of training services

41 BBA AVIATION

+3

Revenue: **$2.18 billion**
Profit: **$163 million**
Flight support and aftermarket services employing around 12,000 people at over 220 locations; London headquarters

42 TELEDYNE

+3

Revenue: **$2.13 billion**
Profit: **$243 million**
Electronic components and subsystems for all aircraft types

43 PARKER HANNIFIN

+3

Revenue: **$2.10 billion**
Profit: **$290 million**
Motion control systems as well as valves, pumps and fluid handling

48 TRANSDIGM

+7

Revenue: **$1.70 billion**
Profit: **$700 million**
Once again, this acquisitive company based in Cleveland is one of the fastest-growing operations in the Top 100; well-balanced and very focused on proprietary aerospace systems, Transdigm is also among the Top 100's most profitable companies

Try to find an aircraft that doesn't fly with Transdigm

Mark Kwiatkowski gallery on Airspace

44 B/E AEROSPACE

-5

Revenue: **$2.09 billion**
Profit: **$540 million**
The cabin and interior products maker is also a large distributor of fasteners and consumables; revenue fell 16.6% in 2012

46 ESTERLINE

+3

Revenue: **$2.00 billion**
Profit: **$190 million**
15.9% sales growth in 2012 from avionics, controls, sensors and advanced materials; Bellevue, Washington headquarters

47 EATON

+3

Revenue: **$1.72 billion**
Profit: **$213 million**
Power management, fuel systems and hydraulics. Eaton saw 4.6% growth in 2012; headquarters in Cleveland, Ohio

49 RUAG -1

Revenue: **$1.67 billion**
Profit: **$109 million**
Civil, business and military maintenance and upgrade, and assembly of the Dornier 228 New Generation turboprop

50 ATI +1

Revenue: **$1.62 billion**
Profit: **not available**
Pittsburgh-based; specialty metals, castings, forgings and machined components

51 IRKUT new

Revenue: **$1.53 billion**
Profit: **not available**
Russia's drive to bring accounting standards in line with Western norms has, finally, started to make its heavy hitters available for the Top 100. Irkut's bid to break the Airbus-Boeing narrowbody market stranglehold is building momentum; the MC-21 – with either Aviadvigatel PD-14 or Pratt & Whitney PW1400G geared fan powerplants – has cut metal for 2014 assembly, 2015 flight and 2017 service. Firm orders are approaching 200 aircraft, including with launch customer Aeroflot

Sales momentum makes MC-21 real
Irkut

53 ST ENGINEERING -1

Revenue: **$1.49 billion**
Profit: **$201 million**
For Singapore Technologies, civil aircraft maintenance, repair and overhaul is a main business, through its ST Aero unit

54 ORBITAL SCIENCES -1

Revenue: **$1.44 billion**
Profit: **$113 million**
Satellites, systems and launchers including the Pegasus rocket, air-launched from modified L-1011 trijet

55 KOREA AEROSPACE +2

Revenue: **$1.39 billion**
Profit: **$114 million**
A variation of KAI's F-16-based T-50 is being offered by Lockheed Martin for the USAF's T-X trainer competition

52 SAAB -19

Revenue: **$1.49 billion**
Profit: **not available**
Revenue was down by 9.7%, but is set to soar with Gripen fighter sales now that Switzerland has committed to the advanced E version. The single-engined fighter may also get a look in in the Netherlands, which is slashing its order for the very expensive Lockheed Martin F-35. And, Boeing is rumoured to have teamed up with the Swedes to offer a Gripen variant for the US Air Force's T-X trainer competition, to replace its ageing Northrop T-38s

Gripen is getting an ever-firmer hold on the fighter market
Saab

ENGINES

GE extended its lead over arch rivals Pratt & Whitney (United Technologies) and Rolls-Royce. But the battle between this big three over the next few years will get interesting, as GE and R-R reap the benefits of (finally) steady Boeing 787 deliveries. Rolls-Royce, however, has sole position on the A350, so when the Airbus big twin starts rolling out in numbers in 2015, the gap may close. P&W, too, looks set for a surge from mid-decade, as its much-heralded PurePower geared turbofan family takes to the skies aboard the Bombardier CSeries and, later, the Airbus A320neo and Embraer's re-engined E-Jets family, called E2. GE and CFM International partner Safran is not being left behind, as it revs up for the race with the CFM56-replacing Leap powerplant – an A320neo option, sole-power for the Boeing 737 Max and a technical tour-de-force. Data junkies will be mainlining on in-service performance comparisons between Leap and PurePower. Down in the supply chain, Volvo Aero disappears from the Top 100 owing to its acquisition in late 2012 by GKN, which reasonably claims to have landed a transformative deal that puts it in a top tier of engine component makers, alongside Avio and MTU.

Bombardier Aerospace

Pure Power, CSeries-style

MTU

MTU Munich: sprawling, like its reach

ENGINE AND COMPONENTS SALES 2012

		$ million
1	General Electric	19,994
2	United Technologies	13,964
3	Rolls-Royce	13,673
4	SAFRAN	9,280
5	Honeywell	6,020
6	MTU	4,476
7	IHI	3,854
8	Avio	2,494
9	GKN	905.1
10	ITP	770

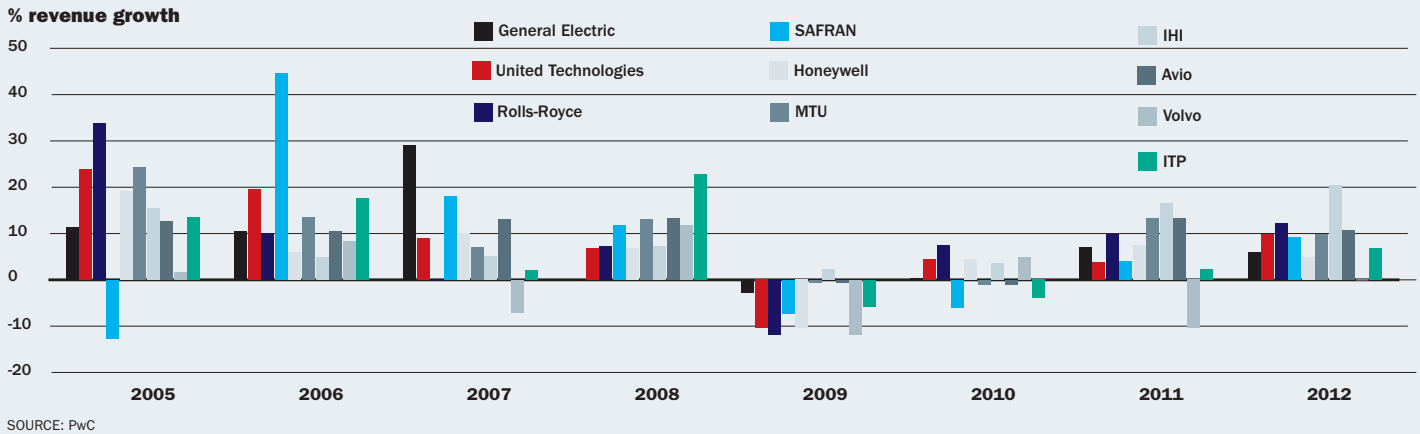
SOURCE: PwC

ENGINES AND COMPONENTS SALES GROWTH

		2012 v 2011
1	GKN*	39.9%
2	IHI	20.5%
3	Rolls-Royce	12.3%
4	Avio	10.6%
5	United Technologies	9.9%
6	MTU	9.8%
7	SAFRAN	9.2%
8	ITP	6.8%
9	General Electric	6.0%
10	Honeywell	4.9%

*Acquired Volvo Aero. SOURCE: PwC

ENGINES AND COMPONENTS SALES GROWTH 2005-2012



SOURCE: PwC

57 HEXCEL

+4

Airbus

Hexcel, quite literally, holds it all together

Revenue: **$1.30 billion**
Profit: **not available**
Hexcel is not a household name, but its expertise in composite materials – including adhesives, fabrics, resins, tooling and structures – puts it smack in the aerospace industry sweet spot, as evidenced by its 2012 revenue growth of 13.9%. High profile programmes flying with Hexcel technology include Airbus's in-development A350, which is built exclusively with Hexcel carbonfibre composites in its primary structures

56 MOOG

Revenue: **$1.32 billion**
Profit: **$147 million**
Electronics master is a motion control specialist; say "M-oh-g", and say "9.7% growth, thank you very much"

58 KONGSBERG

-4

Revenue: **$1.26 billion**
Profit: **$165 million**
Norway's leading defence supplier produces electronic components and integrates weapons, including with the F-35

59 ULTRA ELECTRONICS

+1

Revenue: **$1.18 billion**
Profit: **$189 million**
Ultra provides a huge range of electronic systems, including leading edge ice protection for the Boeing 787

60 CHEMRING

-2

Revenue: **$1.14 billion**
Profit: **$136 million**
UK-based countermeasures specialist bought General Dynamics Detection Systems in 2011

Dominic Perry FlightGlobal

Missile systems? Talk to Kongsberg

62 FUJI HEAVY +2

Revenue: **$1.02 billion**
Profit: **$78 million**
Japan-US industrial ties keep the maker of Subaru cars growing strongly in aerospace – up by 11.1% in 2012

64 GENCORP +1

Revenue: **$986 million**
Profit: **$85 million**
Aerojet is GenCorp's only operating unit; bought Rocketdyne from Pratt & Whitney in 2013

65 HEICO +7

Revenue: **$897 million**
Profit: **$163 million**
Five acquisitions by Florida-based parts maker boosted revenue by 17.3%

61 FOKKER TECHNOLOGIES +5

Revenue: **$1.02 billion**
Profit: **not available**
Formerly part of the Stork Group, the legacy of the long-defunct aircraft maker lives on through the lightweight, robust "Glare" composite panels that feature on the A380. Fokker structures also feature on the G650 and F-35, while other divisions make landing gear, electrical systems and service out-of-production aircraft – including Fokker regional jets

Keep 'em flying

Shahram Sharifi

63 DIEHL AEROSYSTEMS

Revenue: **$1.01 billion**
Profit: **not available**
First-tier avionics and cabin integration supplier, with civil and military customers and programme presence with Panavia Tornado, Eurofighter and A400M. Lavatories business recently marked 20 years of production in Hamburg, starting in 1993 as Airbus-Sell joint venture DASSELL. Lighting and avionics business, Diehl Aerospace, is joint venture 49% owned by Thales

At 950 aircraft, Tornado is Europe's largest military aircraft co-operation programme

CPL Brad Hanson Crown Copyright

66 WOODWARD +2

Revenue: **$896 million**
Profit: **$130 million**
Fort Collins, Colorado-based Woodward Governor makes civil and military fixed wing actuation and flight control systems

67 MDA new

Revenue: **$880 million**
Profit: **$133 million**
Communication systems integrator MDA Communications dates to 1969; satellite-based solutions a strong suit

68 CYTEC new

Revenue: **$877 million**
Profit: **not available**
Specialty chemicals company enters Top 100 with acquisition of carbonfibre materials maker Umeco

69 BALL +2

Revenue: **$877 million**
Profit: **$85 million**
Major player in spacecraft, from antenna and attitude sensors to steering mirrors

70 AMPHENOL

Revenue: **$815 million**
Profit: **not available**
Interconnect systems for harsh environments; Whitstable, UK headquarters

71 LISI +15

Revenue: **$784 million**
Profit: **not available**
Aggressive acquisition strategy puts Paris fasteners maker at no. 2 for growth

74 SENIOR +8

Revenue: **$726 million**
Profit: **$105 million**
Record results in 2012 saw aerospace division revenue grow by 23%, with help from machined parts maker Weston, bought in 2011. UK-based Weston also has facilities in Thailand and, critically for Senior's Boeing-strong aerostructures business, a strong Airbus footprint. Expect further strong growth, though, as 787 production ramps up

Looks like a 20-year cash flow generator

Boeing

Sum of many parts

Airbus

72 ITP +4

Revenue: **$770 million**
Profit: **not available**
The Spanish engine components maker enjoys positions on Rolls-Royce's Trent 1000 and XWB, for 787 and A350

73 LATECOERE +2

Revenue: **$770 million**
Profit: **$36 million**
A strong position on Airbus programmes, including A350 and A380, as well as Embraer regional jets helped French aerostructures specialist to a healthy financial performance in 2012

75 AERNNOVA +3

Revenue: **$707 million**
Profit: **not available**
Concept, design and manufacture of aerostructures and composite and metallic components; Vitoria, Spain

CIVIL

Sales growth of nearly two-thirds at Boeing Commercial Airplanes drove a 21.7% revenue surge among civil aircraft makers. Significantly, all sub-sectors were positive. Large commercial airliner revenue grew by nearly 28% on record deliveries. In business jets, overall sales performance was up 11.2% – a welcome outcome, but almost certainly driven by large-cabin jets. The small-cabin sector that looked so promising pre-crisis has yet to recover – witness the outright demise of Hawker. Regional jets, meanwhile, returned to positive growth, although not enough to reverse the sector's 2011 decline.

COMMERCIAL AEROSPACE REVENUE 2012

		$ million
1	Boeing	49,127
2	Airbus Commercial (excl ATR)	36,943
3	Bombardier	8,628
4	Gulfstream*	6,912
5	Embraer	5,047
6	Dassault Aviation**	3,705
7	Cessna	3,111
8	ATR***	1,440
9	Hawker Beechcraft****	

NOTES: *part of General Dynamics; **Falcon division; ***ATR is an EADS-Finmeccanica JV – sales figures from January 2013 press release; ****no figures publicly released. Source: PwC

COMMERCIAL AIRCRAFT REVENUE GROWTH

		$ million
1	Boeing	35.8%
2	Airbus Commercial (excl ATR)	18.6%
3	Gulfstream	15.2%
4	ATR	10.8%
5	Dassault Aviation	10.3%
6	Cessna	4.0%
7	Embraer	3.6%
8	Bombardier	0.4%
9	Hawker Beechcraft	

NOTES: *part of General Dynamics; **Falcon division; ***ATR is an EADS-Finmeccanica JV – sales figures from January 2013 press release; ****no figures publicly released. Source: PwC

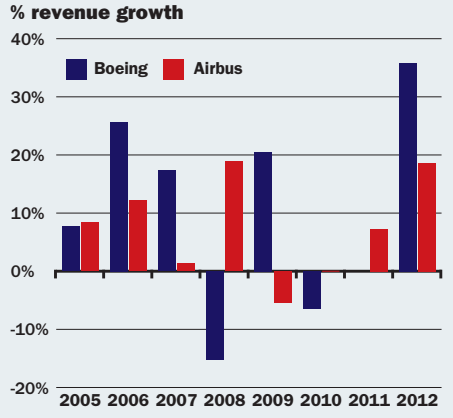
Cessna has regained sales altitude after a big blip during the financial crisis

Cessna

Bllypix

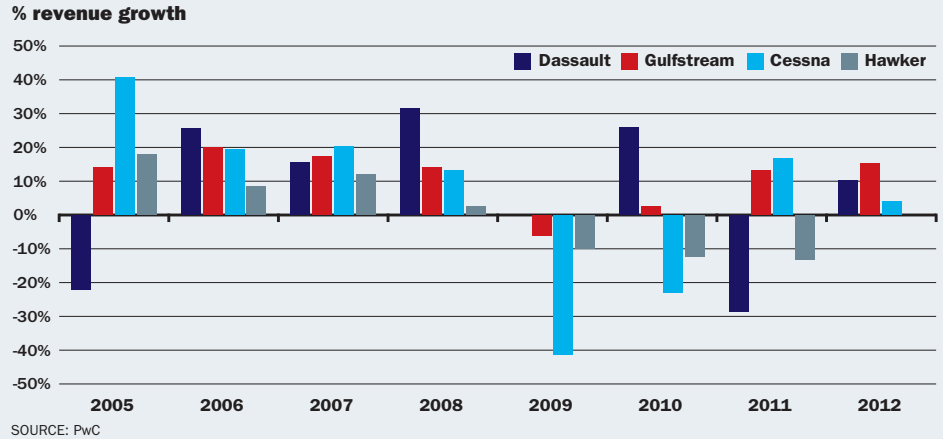
Beechcraft lives on; sister Hawker didn't

LARGE COMMERCIAL AIRCRAFT REVENUE GROWTH 2005-2012



SOURCE: PwC

BUSINESS AIRCRAFT REVENUE GROWTH 2005-2012



SOURCE: PwC

REGIONAL AIRCRAFT REVENUE GROWTH 2005-2012

SOURCE: PwC

76 CRANE +1

Revenue: **$701 million**
Profit: **$156 million**
Components and electronic systems, particularly for engines and landing gear. Recent success includes a contract to fit its anti-skid brake system to Dutch air force Lockheed Martin C-130s

Helping it hold a line

Lockheed Martin

77 FIRTH RIXSON +2

Revenue: **$690 million**
Profit: **not available**
Seamless rolled rings, forgings and specialty metals for engines and other extreme applications

78 AEROFLEX -4

Revenue: **$673 million**
Loss: **$21 million**
Losses have continued for three years running at this microelectronics maker based in Plainview, New York

79 CURTISS-WRIGHT +1

Revenue: **$671 million**
Profit: **not available**
Motion and flow control, metal treatment; Parsippany, New Jersey

When Sukhoi let rip at Paris, the show stopped and ears rang

Bilypix

80 MAGELLAN +1

Revenue: **$640 million**
Profit: **$69 million**
Aero and rocket engine and structural components; based in Ontario, Canada

81 INDRA -12

Revenue: **$613 million**
Profit: **not available**
Madrid-based maker of air transport, surveillance and avionics systems slides down the table with 9.4% sales dip

82 JAMCO +2

Revenue: **$586 million**
Profit: **$33 million**
Japanese supplier of interiors engineering and modification services, as well as metal components

84 PILATUS -11

Revenue: **$568 million**
Profit: **$36 million**
Sales can be lumpy for aircraft makers, and Stans saw inflow slump 24% last year. But Pilatus made a splash at the Paris air show with its first jet, and is also expected to team up with Lockheed Martin to bid for Australia's military pilot training system

The PC-21 is Qatar's training choice
Pilatus

83 KAMAN +2

Revenue: **$581 million**
Profit: **$89 million**
Aerostructures and composites work supplements unmanned K-Max project

85 SKF +2

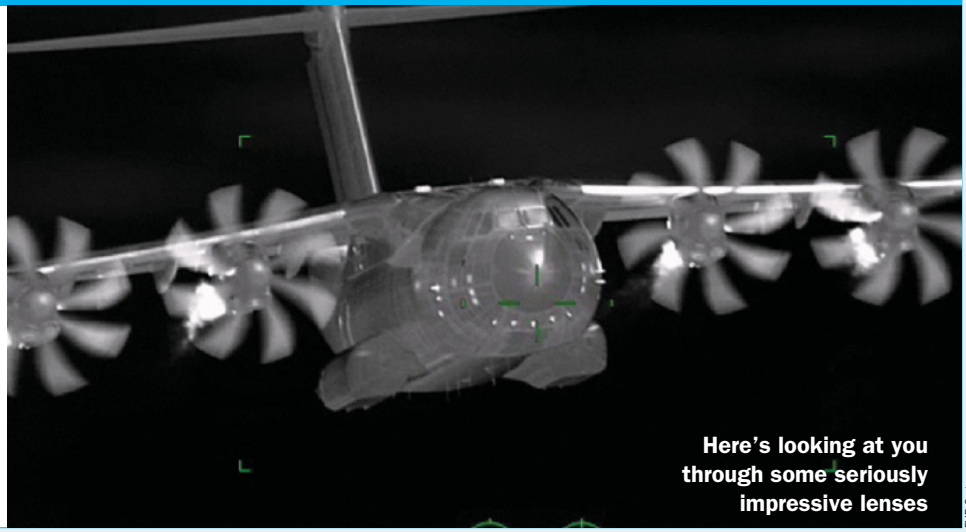
Revenue: **$537 million**
Profit: **not available**
Bearings, seals, struts and elastomers maker is on a roll; sales up by 17%

87 ASCO +4

Revenue: **$384 million**
Profit: **$23 million**
Sales growth in 2012 was 19.7% for Belgian maker of high-lift structures

86 FLIR SYSTEMS -3

Revenue: **$486 million**
Profit: **$160 million**
The Portland, Oregon-based optical systems maker endured a 15.8% slump in revenue after losing 14% in 2011, but held its operating margin at an impressive 33%, down just 3 points. US government sales figure significantly, so volatility is going to be a fact of life for FLIR


Here's looking at you through some seriously impressive lenses
FLIR Systems

88 SONACA

+5

Revenue: **$370 million**
Profit: **$21 million**
The Belgian maker of aerostructures and subsystems has products on every Airbus model. Its annual supplier awards, the airframer just gonged Sonaca "best performer" for the second year running, reflecting continuous improvement efforts at its Gosselies plant

Airbus is Sonaca's traditional customer

Airbus

89 ELETTRONICA

new

Revenue: **$358 million**
Profit: **not available**
The Rome-headquartered electronics specialist supplies avionics and radar warning equipment

90 MARSHALL AEROSPACE

Revenue: **$355 million**
Profit: **$20 million**
The Cambridge-headquartered group is one of the UK's longest-standing maintenance and services suppliers. Support, including upgrades, for the Royal Air Force's C-130 Hercules fleet goes back to its inception in 1967

Marshall has serviced RAF Hercules aircraft since 1967

Marshall Aerospace

91 DENEL

-1

Revenue: **$326 million**
Profit: **$2 million**
Profits were slim – but preferable to the $58 million dropped in 2011

92 DONCASTERS

+3

Revenue: **$317 million**
Profit: **not available**
Forged, machined and superalloy components and assemblies; headquartered in Staffordshire, UK

93 ITT

-5

Revenue: **$312 million**
Profit: **not available**
The rump of the conglomerate broken up in 2011 (see Exelis at no. 38) makes fluid controls and mechanical actuators

94 DUCOMMUN

+3

Revenue: **$310 million**
Profit: **$29 million**
The Los Angeles components maker grew by 5.9% last year as its acquisition of electronics maker LaBarge kicked in

95 GARMIN

-7

Revenue: **$292 million**
Profit: **$73 million**
Avionics systems with a leading position in synthetic vision and touchscreen controllers; grew a modest 2.4% in 2012

99 ACITURRI

new

Revenue: **$192 million**
Profit: **$16 million**
Strong revenue growth of 31.8% propelled the Spanish aerostructures maker into the Top 100; recent highlights include seeing the Airbus A350 fly – Aciturri supplies the vertical tailplane, including composite and metallic structural elements and electrical and hydraulic systems, except the rudder

That bit sticking up at the back comes from Aciturri

Airbus

96 MARTIN BAKER

-4

Revenue: **$275 million**
Profit: **$65 million**
Ejection seat maker supplies the F-35; growth in 2012 was a nominal 0.6%

97 HEROUX DEVTEK

-3

Revenue: **$249 million**
Profit: **not available**
Quebec-headquartered landing gear specialist operating from eight facilities in North America

98 TERMA

-2

Revenue: **$203 million**
Profit: **$13 million**
Electronic warfare and alternate mission equipment, including a multi-mission pod for the F-35; based in Denmark

100 CIRCOR

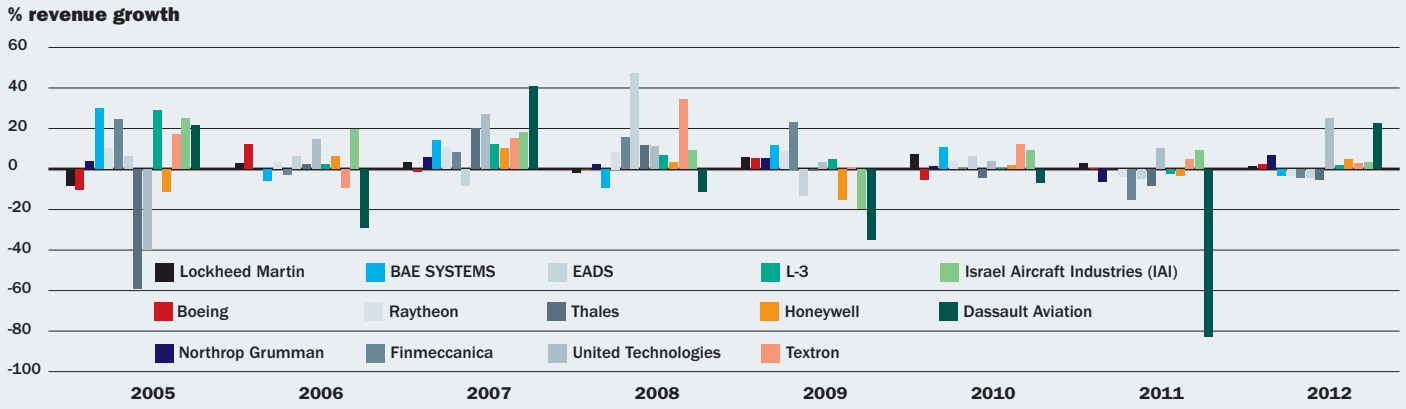
-2

Revenue: **$141 million**
Loss: **$2 million**
Valves, motors, actators and landing-gear products, including for the Boeing CH-47 Chinook; Corona, California

Dassault Rafale

French Airforce

DEFENCE AEROSPACE SALES GROWTH 2005-2012



SOURCE: xxxxxx

DEFENCE

Sales growth figures didn't make especially happy reading in 2012, and all indications suggest more of the same – or worse – in 2013. The obvious culprit is so-called sequestration in the US and the generally grim state of European economies. Some firms are reporting good results – especially down the supply chain, where makers of spare parts and equipment for electronic upgrades are holding up as militaries look to extend the lives of existing equipment. Growth-wise, two exceptions stand out: United Technologies, which got a boost from its acquisition of Goodrich, and Dassault, which took a big French air force order for Rafale fighters. Both were one-offs – though Dassault could repeat or even exceed its 2012 growth performance if France and India ever reach final agreement on New Delhi's order for 120 Rafales.

DEFENCE AEROSPACE REVENUE GROWTH

		2011 v 2012
1	United Technologies	24.8%
2	Dassault Aviation	22.5%
3	Northrop Grumman	6.6%
4	Honeywell	4.9%
5	Israel Aircraft Industries	3.0%
6	Textron	2.8%
7	Boeing	2.0%
8	L-3	1.8%
9	Lockheed Martin	1.3%
10	BAE SYSTEMS	-3.1%
11	Raytheon	-3.4%
12	Finmeccanica	-4.2%
13	EADS	-4.3%
14	Thales	-5.0%

SOURCE: PwC

DEFENCE AEROSPACE SALES 2012

		$ million
1	Lockheed Martin	38,835
2	Northrop Grumman	28,143
3	Boeing	27,716
4	Raytheon	17,862
5	EADS	16,358
6	Finmeccanica	13,226
7	United Technologies	12,100
8	L-3	10,585
9	Thales	9,922
10	BAE SYSTEMS	8,733
11	Honeywell	5,418
12	Textron	4,288
13	Israel Aircraft Industries	3,400
14	Dassault Aviation	1,515

SOURCE: PwC

Staff Sgt. Andy M. Kin-USAF

F/A-18 still cuts a dash

Alenia Aermacchi

M-346: Alenia colours

TOP 100 BY COMPANY NAME

Company	Company ranking 2012
Aciturri (new)	99
Aernnova	75
Aeroflex	78
Alcoa	28
Alliant Techsystems	31
Amphenol	70
Asco	87
ATI	50
AVIC (new)	37
Avio	32
B/E Aerospace	44
BAE SYSTEMS	15
Ball	69
BBA Group	41
Boeing	1
Bombardier	16
CAE	45
Chemring	60
Circor	100
Cobham	36
Crane	76
Curtiss-Wright	79
Cytec (new)	68
Dassault Aviation	22
Denel	91
Diehl Aerosystems	63
Doncasters	92
Ducommun	94
EADS	2
Eaton	47
Elbit Systems	34
Elettronica (new)	89
Embraer	17
Esterline	46
Exelis	38
Finmeccanica	8
Firth Rixson	77
FLIR Systems	86
Fokker Technologies	61
Fuji Heavy Industries	62
Garmin	95
GenCorp	64
General Dynamics	4
General Electric	9
GKN	40
Harris	26
Heico	65
Heroux Devtek	97
Hexcel	57
Hindustan Aeronautics	33
Honeywell	12
Indra	81
Irkut (new)	51
Ishikawajima-Harima	27
Israel Aircraft Industries	30
ITP	72
ITT	93
JAMCO	82
Kaman	83
Kawasaki Heavy Industries	35
Kongsberg	58
Korea Aerospace Industries	55
L-3 Communications	13
Latecoere	73
LISI	71
Lockheed Martin	3
Magellan Aerospace	80
Marshall Aerospace	90
Martin Baker	96
MDA Communications (new)	67
Meggitt	39
Mitsubishi Heavy Industries	19
Moog	56
MTU Aero Engines	25
Northrop Grumman	6
Orbital Sciences	54
Parker Hannifin	43
Pilatus	84
Precision Castparts	20
Raytheon	7
Rockwell Collins	23
Rolls-Royce	11
RUAG	49
SAAB	52
SAFRAN	10
Senior	74
Singapore Technologies Engineering	53
SKF	85
Sonaca	88
Spirit AeroSystems	21
Teledyne Technologies	42
Terma	98
Textron	14
Thales	18
Transdigm	48
Triumph Group	29
Ultra Electronics	59
United Technologies	5
Woodward Governor	66
Zodiac	24

SOURCE: PwC

DATA SOURCE

The Flight International Top 100 was compiled by aerospace experts at PricewaterhouseCoopers LLP ("PwC"). The information used in preparing this report has been obtained solely from company Annual Reports, public filings and other publicly available information. PwC has not sought to establish the reliability of this information and has not verified such information. Accordingly, no representation or warranty (whether express or implied) is given by PwC as to the accuracy of this information.

COMPANY/DIVISIONS

The top line of the financial figures refers to consolidated results for the overall group. The divisional figures are for those businesses that are fully or largely concerned with aerospace. Groups have been ranked by their aerospace sales in 2012, calculated from those divisions that operate primarily in the industry. Sectors involved with aircraft, aeroengines, avionics, missiles, space and aerostructures are largely straightforward, but telecommunications, network-centric and C4I systems and some overhaul operations are included only where these are largely concerned with aerospace activities. Satellite services have been excluded wherever possible, as have companies and divisions that derive more than 50% of their revenues from services such as leasing. Where acquisitions were made within the accounting period, pro-forma accounts have been used for the 12-month consolidated performance. Joint ventures have been included in the financials. Inter-segment sales have been excluded from operating results and profits for divisions where possible. When not possible, each divisional result has been presented inclusive of inter-division sales, resulting in aerospace revenues greater than group sales.

EXCHANGE RATES

An average exchange rate for the period 1 January 2012 to 31 December 2012 has been used for all non-US companies, regardless of fiscal year definitions. The percentage changes in financial figures are given in local currency terms to avoid unnecessary distortions

COUNTRY

All companies have been listed by country of headquarters or incorporation, independent of production or operating territories.

OPERATING RESULTS

Generally taken as the profit (or loss) before interest, tax and exceptional items and after deduction of depreciation. The measure gives a generally accepted guide to a business's operational performance. Discontinued or discontinuing operations are included where they fall in fiscal year 2012 for that business.

ROCE

Return on Capital Employed (ROCE) is calculated as earnings before interest expense, taxes, unusual items and minority interests divided by year-end total assets less year-end non-interest bearing current liabilities.

Airbus

Do you have a succession strategy in place for when they leave?

TALENT MANAGEMENT **PWC** DEAN GILMORE & HELEN ORTON

CREATING AN ENVIRONMENT WHERE EMPLOYEES CAN THRIVE

COMPETITION FOR skills has never been more fierce. Forecasts suggest the UK science, engineering and technology sectors will need more than 800,000 professionals between now and 2020, far outstripping graduate supply; last year, only one university applicant in six was accepted onto aerospace engineering courses. Successfully attracting and managing talented people is a challenge – but there are steps companies can take.

Make sure you understand your unique selling point: businesses that clearly articulate what makes them different and the value they offer employees are more likely to recruit and retain the best people. Retention rate should be tracked. If people are leaving, ask them why.

Provide the right employment package: in a competitive market, raising salaries may not be enough. Businesses should consider whole compensation packages including innovative bonus structures and other benefits. Opportunities to travel, flexible working and addressing the changing aspirations of different demographic groups will carry weight.

Develop a strategy to retain your best employees: businesses need to understand their existing skills base. What capabilities do you have and what will you need to help your business grow? Is your business changing or does it need to change? Do you have the right training schemes and succession strategy in place to prepare for experienced workers leaving the organisation and taking their knowledge and skills with them?

Encourage flexibility and mobility: once a business has clear visibility of its talent map and resource needs, it may be able to redeploy or relocate people. However, cross-border working can be complex to administer. Have you considered alternatives to long-term redeployment such as short secondments or remote working? Do you have a clear strategy for managing leavers and returners?

Make globalisation work for you: operating in a global industry means competition for talent can come from anywhere. Are you accessing the global talent pool or fostering links with foreign universities and technical colleges? Some of our clients are recruiting directly from overseas and others are sending apprentices into nearby schools and colleges to develop local interest in their organisation and sector.

Continuously develop your people: developing people takes time but is an essential investment. Can you implement programmes to accelerate talent development and minimise the less-productive early career period, when practical skills are being built?

In a global industry competition for talent can come from anywhere

Champion engineering: industry bodies and individual businesses can and should to engage with government, educators and the wider population to help shift lingering misconceptions about the industry and the engineering profession.

Education and training: it isn't all about graduates. What relationships do you have with local schools and colleges? Are you well known as a great employer? Opportunities could lie in building these relationships now.

Implementing just one of these ideas won't make a difference. Each business needs to develop a system that incorporates a mix of different strategies to appeal to a broad range of people. This means thinking harder and differently about how you invest in and look after your people. Organisations that manage this will attract and retain the best talent and, with it, their competitive edge.

PwC has extensive experience across the aerospace, defence and security industry and in the wider industrial products sector. We help organisations in a variety of ways, from designing effective compensation packages through to benchmarking their organisation and building effective talent management strategies. ■

For more information email UK Aerospace and Defence leader Dean Gilmore at dean.gilmore@uk.pwc.com

Read more on aerospace industry strategy at **flightglobal.com/PwCa&d**