

FUTURE AVIATION SKILLS PATHWAY

Action Plan



SUMMARY



Driver

Aviation is evolving with increased automation and zero emission propulsion at the heart of the changes

Slide 3



Analysis

Through extensive stakeholder engagement, we identified that there will be a gap in apprenticeship standards, if they don't evolve to keep up with changing trends

Slides 4, 5, 6



Action

DfT should convene industry and training providers to develop new apprenticeship standards

Slides 7,8,9



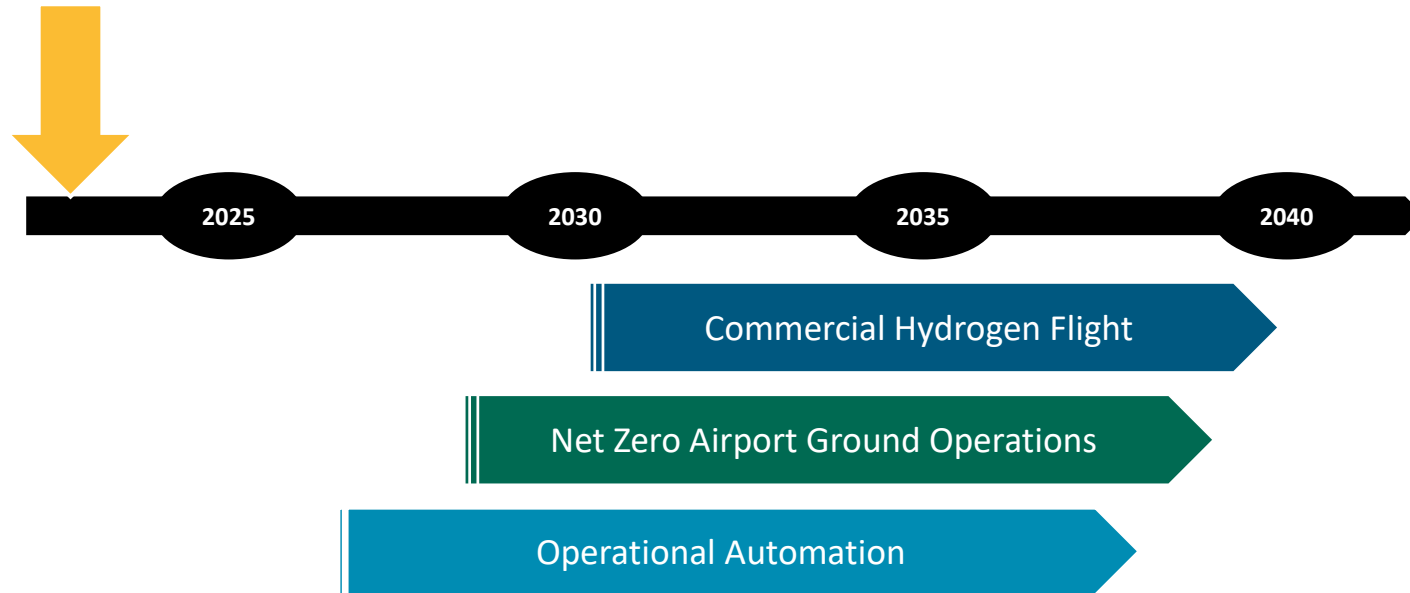
Impact

This will ensure that the aviation sector has people with the right skills by the time new trends have materialised in day-to-day operations

Slide 10



AVIATION IS EVOLVING.



New Aviation Propulsion Systems

Hydrogen and electric aircraft are being introduced to reduce emissions from air travel. These require new fuelling procedures and may change the priorities in airspace management.

Automation

Automation of ground handling operations will reduce the low-skill workforce which make up the majority of the workforce. Also, greater IT and digital skills will be required.

Net Zero Ground Operations

Ground operation vehicles will also transition to zero emission propulsion which will change maintenance roles considerably and place a focus on sustainability throughout the sector.

SKILLS NEED TO ADAPT.



This study focused on the changing requirements for skills in the aviation sector.

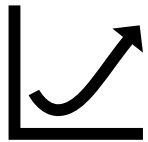
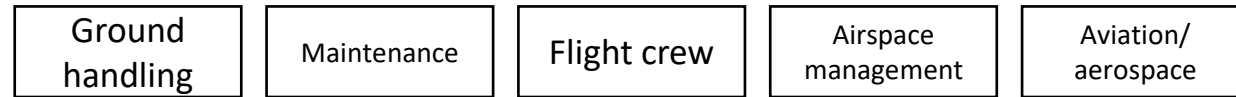
Aviation is everything about flight and air travel except for the design and manufacture of the aircraft.



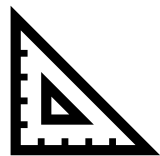
We identified four categories of skills pathways to aviation roles.



We have grouped aviation roles into five functions.



Due to emerging trends, some aviation functions will require new skills, and whole new functions may emerge in certain areas.



Aerospace roles including the research, development, design and manufacture of aircraft are out of scope.



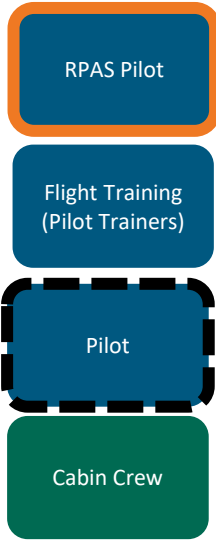
There are existing activities in this area such as Aerospace Skills Development.

AVIATION

Generic / Transferable



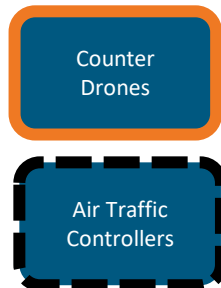
Flight crew



Ground handling

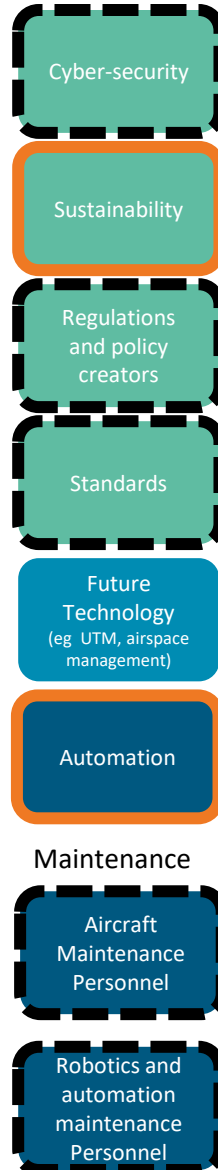


Airspace management



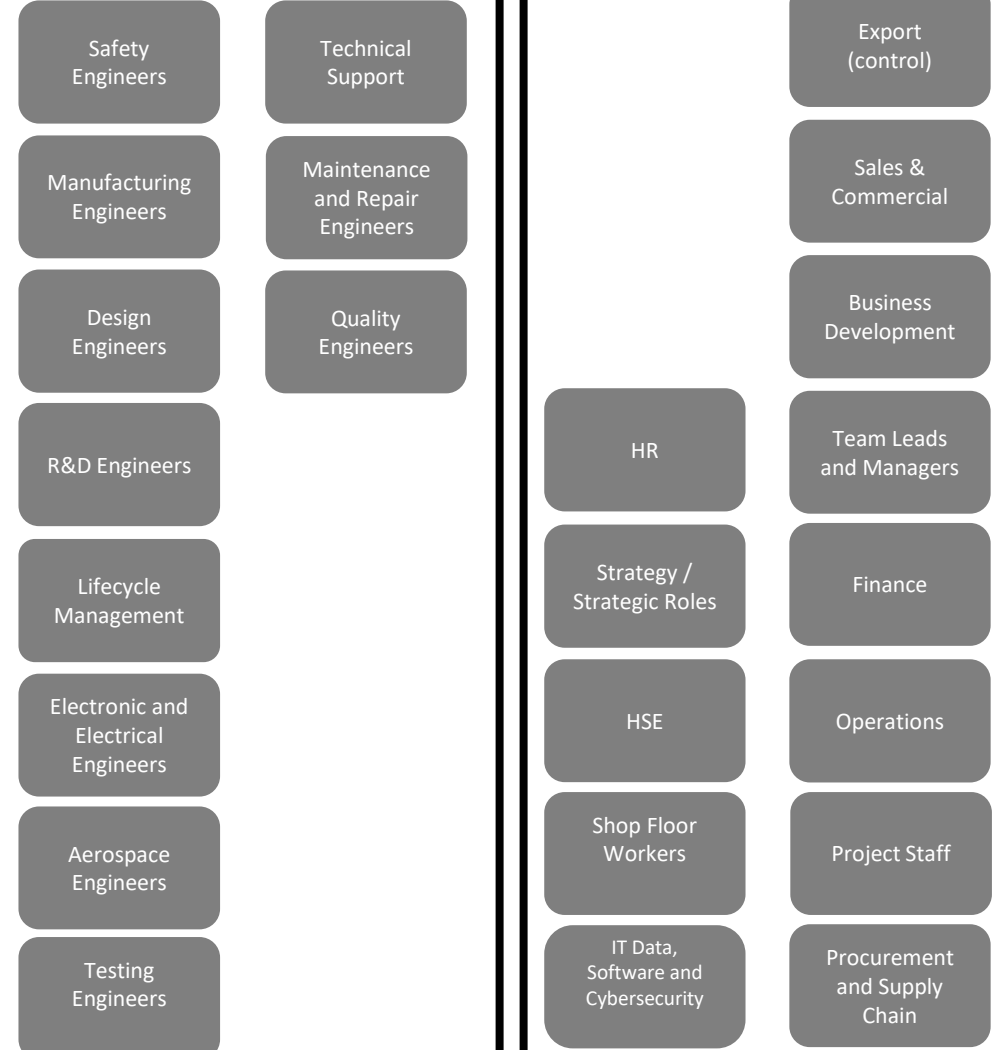
AVIATION SPECIFIC

Aviation/aerospace



AEROSPACE

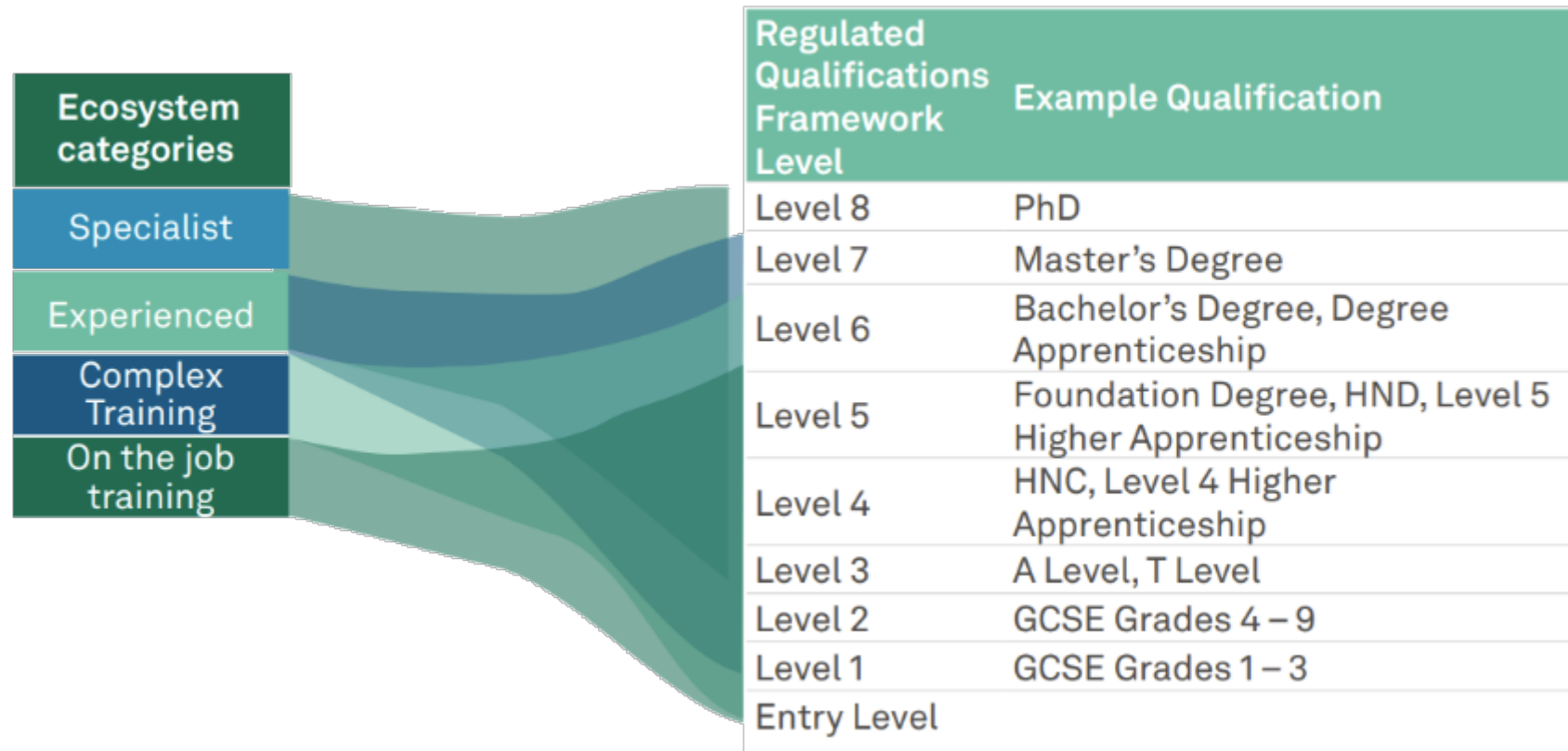
Generic / Transferable



SPECIALIST SKILLS REQUIRE SPECIALIST TRAINING.



There are insufficient apprenticeship standards to meet the changing needs



GOVERNMENT AND INDUSTRY ACTION IS REQUIRED.



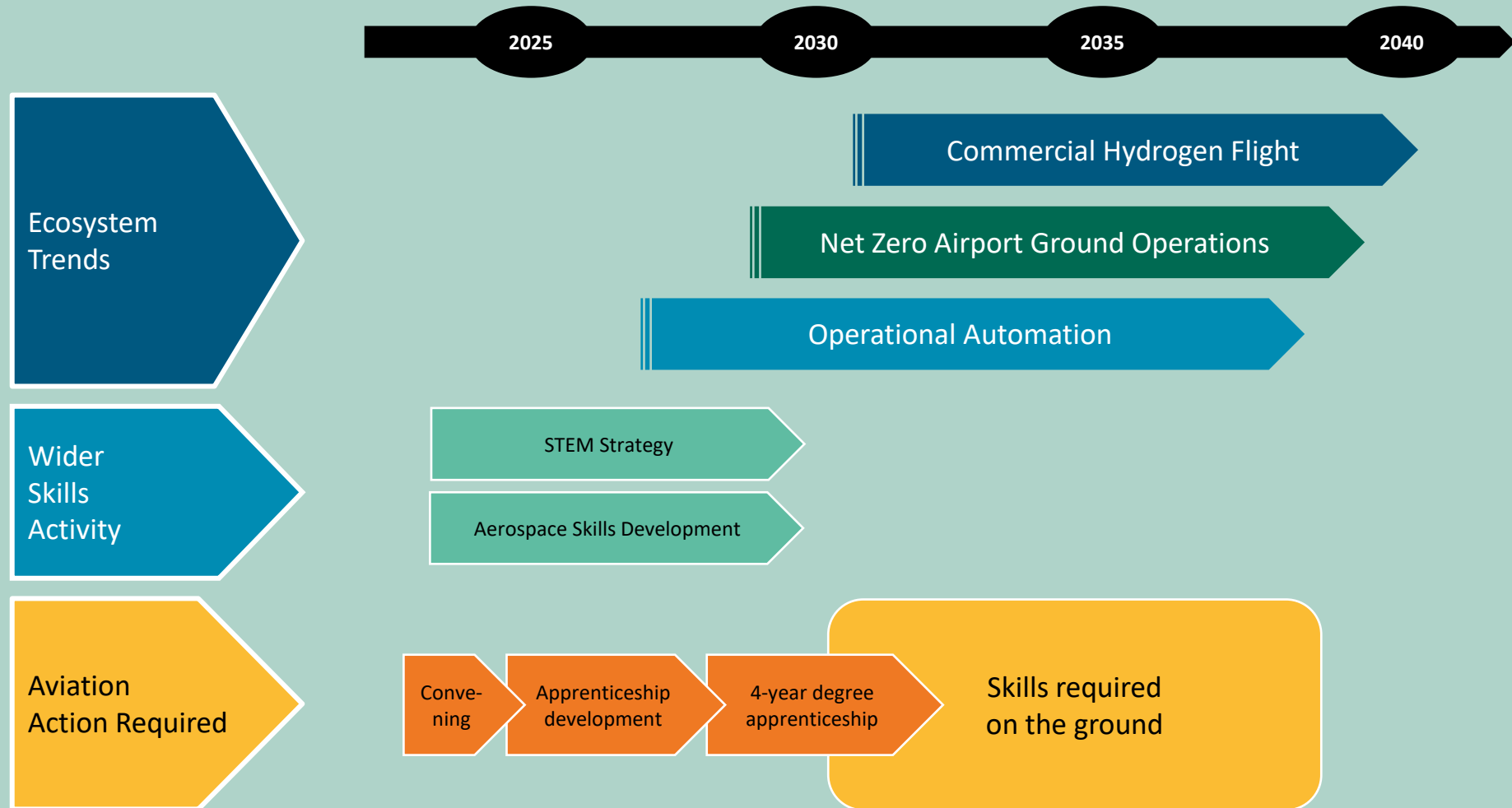
An emerging aviation challenge is...	The risks could be mitigated and opportunities grasped through...	The role of industry is to..	The role of DfT is to...	If not addressed, it could lead to..
Aviation is not attracting enough talent	<ul style="list-style-type: none"> • STEM outreach, more excitement around sector and a focus on diversity and inclusion to get a greater pool of talent at grassroots • Exploit skills transfers from other sectors e.g. data scientists 	<ul style="list-style-type: none"> • Push STEM outreach • Pursue talent from other areas in transferrable skills – e.g. data scientists • Adopting a dynamic approach, focussing on transferrable skills, could result in a more resilient supply of skills to the industry. 	<ul style="list-style-type: none"> • Continue to promote aviation as well as aerospace as a great sector for jobs and growth, to attract talent further afield from airports • Convene and facilitate collaboration between aviation industry and training providers to ensure that the right skills and training is being provided 	Shortage of people in the sector, UK left behind in exploiting transformative trends in aviation.
Aircrafts with new propulsion systems including electric and hydrogen being introduced	<ul style="list-style-type: none"> • New apprenticeship standards to meet the needs of emerging trends, targeting higher skill levels • Re-skilling maintenance workers to accommodate use of electric and hydrogen vehicles. • Increasing safety training to all staff and wider system actors e.g. firefighters to equip them with the skills to deal with new risks 	<ul style="list-style-type: none"> • Update apprenticeship standards to reflect the anticipated displacement of conventionally fuelled aircraft by new fuel types such as hydrogen and fully-electric aircraft • Invest in remote training methods such as augmented reality and simulators to train staff faster and more safely. 	<ul style="list-style-type: none"> • Convene and facilitate collaboration between aviation industry and training providers, accelerating development time to reduce impact on training the potential future workforce. 	The sector not being equipped with the skills to transition to new propulsion systems. As a result, the UK may fall behind Net Zero targets.



GOVERNMENT AND INDUSTRY ACTION IS REQUIRED.

An emerging aviation challenge is...	The risks could be mitigated and opportunities grasped through...	The role of industry is to..	The role of DfT is to...	If not addressed, it could lead to..
Greater automation of flight and ground operations	<ul style="list-style-type: none">• Up-skilling of low-paid workers in digital and technology areas to avoid job losses.• Increasing data and engineering roles.	<ul style="list-style-type: none">• Offer on the job training programmes in digital skills and IT.• Learn from other sectors also experiencing automation transformation.	<ul style="list-style-type: none">• Convene and facilitate collaboration between aviation industry and training providers, accelerating development time to reduce impact on training the potential future workforce.• Support digital and IT skills across the population, at schools and general apprenticeships.	<ul style="list-style-type: none">• The UK not being able to make best use of efficiency improvements from greater automation, increasing the cost to the public and UK business of air travel.
Complicated and inefficient airport passenger experience	<ul style="list-style-type: none">• A focus on upskilling for soft skills, helping passenger to navigate a more digital experience at airports.• This is especially important in the context of an ageing population where older passengers may not be able to respond to the rate of change in airport systems quickly.	<ul style="list-style-type: none">• Incorporate more customer service roles into the passenger experience to improve passenger journey and efficiency.	<ul style="list-style-type: none">• Convene and facilitate collaboration between industry, accessibility experts and training providers to ensure that the right skills and training and being provided.	<ul style="list-style-type: none">• Future passengers having a poor experience of UK airports, low efficiency of movements round the airport system and the UK detracting air passengers.

TIMEFRAME.



IMPACT.

- By convening the aviation industry and training providers at an early stage, Government can ensure that apprenticeship standards are futureproofed for emerging trends.
- This will lead to a thriving aviation sector, with the right skills at the right place at the right time.

