

# ACHIEVING CORPORATE TRAINING 'LIFT OFF' FOR THE AVIATION INDUSTRY

# ADDRESSING SECURITY ISSUES, INCREASING REGULATIONS & A GROWING SKILLS GAP



# Achieving Corporate Training 'Lift Off' for the Aviation Industry

Addressing security issues, increasing regulations and a growing skills gap

The aviation industry is experiencing tremendous growth and is expected to double to 8.2 billion travelers by the year 2037 (Garcia, 2018).

But, as the supply chain struggles to keep up with demand due to the ramp-up in production, volatility in the geopolitical and economic environment is increasing and a growing labor shortage is lurking in the background.

On top of that, regulations are constantly changing making things even stickier for the aviation industry.

So, considering that the industry has security and regulation issues as well as a talent shortage, choosing a learning management system (LMS) for corporate training is extremely difficult.

Security challenges, if overlooked, could cause more than just a bumpy ride. No matter cyber threat or insider threat, a software security breach could lead to malfunctions, compromised customer data or expose intellectual property to unauthorized users.

Technology options are very limited and narrows the field of LMS choices to pick from. And, not every LMS can offer the security requirements needed by the aviation industry.

From pilots and ground crew to manufacturing and servicing, compliance training is a must and can mean the difference between life and death. As a result of increasing regulations, meticulous and consistent records must be kept, and employees must demonstrate they've received the necessary information and instruction across numerous disciplines.

The repercussions of non-compliance can negatively impact all areas of business.

Not only will it mean a disruption of business and loss in productivity but in 2017, the average cost of non-compliance was \$14.82 million (Merkulov, 2018).

This is astounding and a big reason why aviation accountability demands are so extreme.



The last big area of concern for the aviation industry is a rising skills gap. Work and skill requirements in aviation continue to become more advanced and there are less and less people to fill those positions.

According to the Aviation Technician Education Council, Boeing estimates the aviation industry will need 754,000 new aircraft technicians over the next 20 years. About 30 percent of the current ranks of aircraft mechanics are at or near retirement age and they're retiring faster than they're being replaced.

If the skills gap isn't addressed, then it can result in productivity losses as well as impaired innovation and competitiveness.

With these concerns, specific to all areas of the aviation industry, it's no wonder that many LMSs will crack under pressure.



## Problem

Security has and always will be a matter of concern for the aviation industry.

The technological world is advancing at a rapid pace and so are the threats. With modernization of technologies, the aviation industry is getting more and more systems-based, meaning everything is interrelated in some way, including training.

Thus, appropriate security measures are essential to safeguard the aviation industry.

In fact, it's not unusual for companies within aviation to require an LMS to be on-premise and behind the firewall as well as need it to integrate with only pre-approved systems.

Right off the bat, this excludes many potential LMS vendors.

Aviation has by nature always been highly regulated. Safety is a big concern and the repercussions of not following strict compliance policies can be catastrophic! Just one preventable airline crash can cause insurmountable damage to a business from fines to lawsuits, loss of sales and damage to reputation.

As mentioned before, the industry is expected to double by 2020 (Rosen, 2018).

This only means more oversight and regulations to follow, more moving parts that must be coordinated and, of course, more training required.



#### Consider the following,

- As of 2018, there are around 5,000 airlines across the globe with a total fleet of around 25,830 aircrafts
- Around 56 million people are employed and engaged in aviation activities and other related tourism, of these, approximately 8.36 million work directly for the industry

Training every employee from pilot and crew members to the maintenance crew about the changing norms, regulations and skills is a daunting task (Goel, 2018).

Standard operating procedures are how most of these norms and regulations are communicated. They exist to achieve efficiency, quality output and uniformity of performance, while reducing miscommunication and failure to comply with industry regulations.

Training plays an important part when implementing a new or updated SOP since the training is what teaches employees on the new procedures. This is where the LMS plays a vital role — being able to schedule and track the training of individuals on the SOP's.

In aviation, the number of SOPs being generated and updated continuously makes for a very difficult situation to manage, especially at scale. Version control can be problematic and the ability for some LMSs to keep up is mediocre at best.

This intense need by the industry for very deep functionality surrounding the topic of version control cannot be answered by just any training system.

According to the Boeing Long-Term Market Forecast (2016-2035), the global aviation industry will need to hire more than 2 million aviation personnel.



617,000 Commcial Pilots





814,000 Cabin Crew

679,000 Maintenance Technicians

These statistics don't include all the "other" types of positions that need to be filled and certainly don't account for the creation of new types of career opportunities that will emerge with the advancement in technology and other factors we are not yet aware of.



This will be a daunting task for future training needs, especially when there continues to be a very large gap between job requirements and qualified workers.

In this case, an LMS needs strong on-boarding and certification/ongoing educational capabilities. It also must be able to address the talent gap with customizable job shadowing, skill tracking and flexible learning.

# Solution

There is no question that the aviation industry has complex problems related to training that can only be addressed by a deep learning solution.

Unlike most LMSs on the market, the answer lies in finding a training system that fits into the entire business ecosystem and not just as an outside player.

When the puzzle pieces fit together, magic happens.

An LMS that becomes a part of a network of existing relationships, interfaces and processes undoubtedly will deliver value and efficiency.

This is especially important when it comes to maintaining security as well as addressing increased regulations and



skills gap issues.

For example, when an LMS ties in all the different aspects needed for regulatory compliance such as content management, assignment, tracking and reporting — it reduces the chance of mistakes, gaps or process errors that result in a compliance failure.

But no solution will suffice if it doesn't meet certain technological requirements.

### Security

Security is the first hurdle of finding an LMS that will meet the unique needs and challenges of the aviation industry.

Many, if not most, companies that are in aviation require that an LMS be on-premise and is often a deal breaker during the selection process. In addition, there might be other "approved" systems that the LMS has to work with as well.



"We see clients waste a lot of time and energy during the LMS selection process on systems that simply won't work for their needs. That's why we suggest that anybody looking for an LMS be knowledgeable about their company's IT strategy right from the beginning. It will help narrow down the options, simplify the process and bring you closer to a system that will be a good fit."

> Keth Crotty, Director of Business Development at ShareKnowledge

The answer to this is an on-premise LMS based on technologies that have already been approved for high compliance industries, like Microsoft. Or, in certain circumstances, a highly secure private cloud infrastructure or one that can be controlled by the organization.

Leading the search for an LMS with technology needs first vs. features and/or functionality is a better route to go in order to achieve success and makes it so much easier to get approval for the LMS in the first place.

#### **Increase Regulations & Compliance**

Increased regulations and the training complexities that come with it is the second hurdle that must be addressed during the LMS selection process.

"It's not enough for an LMS to just say they can handle compliance. They need to be able to do it, and at scale. Because, the fact is, highly regulated companies like aviation require an LMS that can tackle very large amounts of data (e.g., SOPs) as well as complex processes."

Denis Kovalchuk, Head of Compliance Training Solutions, ShareKnowledge powered by EPAM

Any LMS selected must provide the depth needed and required by the aviation industry. An average company may have 20, 50 or even 200 training modules. But, when it comes to a highly regulated industry like aviation, it could be ten times that amount!

This is where the importance of choosing an LMS that will fit into an existing business ecosystem will be beneficial, especially for compliance concerns.

Choosing a solution that inherits complex business processes and workflows already developed and adding in LMS functionality only strengthens the ability to stay compliant - turning every SOP, work instruction or content into a trackable, reportable and automatically distributed training resource.



So, no matter how many regulations there are or how often they are updated, the LMS can keep up. And, most importantly, it's done automatically and at scale.

Using ShareKnowledge as an example, what usually requires a separate, costly and complicated learning content management system (LCMS) is achieved natively within the LMS and the existing content creation tools used throughout the company (Microsoft Office 365, etc.). Thus,

- Content authoring,
- Customizable content approval workflows,
- Storing,
- Distribution,
- Notification,
- Searching,
- Version control and editing,
- Tracking and reporting

are all auditable, native and incorporated into ShareKnowledge — meeting the content creation and approval requirements throughout the organization and providing the audit requirements of the learning, risk management and audit teams.

Document	Training management
management	& delivery
	<b>^</b>



This is an ideal situation – update an SOP once and it automatically gets pushed out to the LMS that updates the correct version throughout every learning pathway in the system. All employees who need the updated training are then sent notifications and reminders.



There is a lot of data when it comes to highly regulated industries so an LMS must be able to handle and process it as well as compile it into an easy to understand format. In addition, detailed reports should also be able to be pulled in real-time by managers throughout the organization, not only from one centralized point.

This includes but is not limited to assessments, certifications, completions and acknowledgements. And, these reports can be pushed out to various levels in the

office and in the field, allowing for work assignments in accordance with risk management requirements.

### Skills Gap

An LMS must provide a solid training tool for managing the skills gap crisis within the aviation industry.

A skills checklist makes it easy to do job shadowing or for a supervisor to employee skill assessments or competency assessments.





#### Maintenance, Installation, and Repair Pathway

Basic Industrial Equipment Unit		Minimum rating of 2 for EACH Check Rating		
	1	2	3	
<ol> <li>Read technical drawings and work orders</li> </ol>				
<ol><li>Interpret equipment symbols and procedures</li></ol>				
3. Maintain schedules, communication, and documentation				
<ol><li>Monitor equipment for correct operation</li></ol>				
5. Identify maintenance requirements				
6. Layout and plan work				
7. Perform safety checks				
8. Use hand tools				
9. Perform preventive maintenance (PM)				
10. Perform lubrication procedures				
11. Assist with basic equipment problem identification and diagnosis				
12. Assist with basic equipment repair				
13. Assist to re-qualify equipment				

#### **Rating Scale:**

- 3 = Exceeds entry level criteria | Requires minimal supervision | Consistently displays this behavior
- 2 = Meets entry level criteria | Requires some supervision | Often displays this behavior
- 1 = Needs improvement | Requires much assistance and supervision | Rarely displays behavior

Look for an LMS which replaces this kind of paper process so there is less paperwork and an audit/reportable history.

In aviation these lists can be 20 to 100 items long. And, often multiple checklists must be completed — helicopters vs planes, airbus 200 vs airbus 300 or Boeing checklist vs Airbus checklist (customer specific skills).

These specific checklist requirements are scored or graded by a supervisor on the floor working with or watching the learner preform duties. They may quiz the learner by asking for them to 'explain those hazmat logos to me,' 'use this torque wrench,' or 'put on the rotor blade' and then score them after it's done.

This is a form of live, face-to-face assessments. The training is the learner working on the job for weeks.

The skills checklist provides affirmation that they are competent (or not) in certain pre-defined and reportable areas.

The ability to do on the job training, instructor-led training and eLearning, and have it all captured within the LMS is very beneficial for this industry. At any given time, a company can quickly see who is in the pipeline for a certain job and visibly see where there might be a skills gap area to address.

And, when an LMS is mobile friendly, it expands who has access to training whether they're behind a desk or on the floor.



## Conclusion

The sky's the limit for the aviation industry, but in order to get and maintain 'lift off,' they must plot a new course and navigate around the turbulence i.e., security issues, increasing regulations and skills gap.

By putting in place the right tools, technology and processes in the form of a comprehensive training solution that integrates with the larger business operations, it enables companies to reach new heights.

Choosing an LMS that can effectively support the needs of the aviation industry is invaluable.

The right solution will be the catalyst that ensures employees, from manufacturing through in-flight service, are properly trained and empowered to do quality work.

The right LMS can be pivotal in getting the "all clear" and taking off for a bright and successful future.



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