Eskişehir Technical University Publications, No:13.

ESKİŞEHİR TEKNİK ÜNİVERSİTESİ
ESKİŞEHİR TECHNICAL UNIVERSITY

Hochschule Worms
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TAV TECHNOLOGIES

INTERNATIONAL WORKSHOP ON

# SKILLING YOUTH FOR THE NEXT GENERATION AIR TRANSPORT MANAGEMENT

WITHIN ERASMUS+ KA-210-YOU PROJECT

# BOOK OF ABSTRACTS

AUGUST 30 - SEPTEMBER 01, 2022
ISTANBUL - TÜRKİYE

TÜRKİYE ULUSAL AJANSI
TURKISH NATIONAL AGENCY

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Editors: Savaş S. ATEŞ, Emircan ÖZDEMİR

ESKİŞEHİR TECHNICAL UNIVERSITY

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# PREFACE

Dear Readers,

We are proud to present the abstract book of the International Workshop on "Skilling Youth for the Next Generation Air Transport Management" within the scope of the Erasmus+ 2021-2-TR01-KA210-YOU-000048913 youth project.

The knowledge economy and its tenets dominate the era we live in. Therefore, every professional should be equipped with skills such as complex problem-solving, creativity and innovation, critical thinking, decision-making, and collaboration as a necessity of this era. These skills, called 21st-century skills, are important in every field to meet today's requirements. One of these areas is undoubtedly the air transport industry, which is in a growing trend despite the devastating COVID-19 pandemic. It is vital that professionals with 21st-century skills are present in this industry. Therefore, it is a necessity that the education curricula of institutions providing aviation management and air transport education at undergraduate and postgraduate levels should be capable of providing 21st-century skills.

In response to this issue, the International Civil Aviation Organization (ICAO) launched the Next Generation of Aviation Professionals (NGAP) initiative in 2009, anticipating a shortage of skilled aviation professionals in the near future.

The NextGenATM initiative aims to manage and maintain strategies that will ensure the employment of a sufficient number of skilled professionals in the air transport industry. Parallel to the ICAO NGAP initiative, this workshop aims to get a better picture of the air transport industry in Europe and to develop and share best practices and tools with stakeholders to attract and educate the next generation of air transport professionals. In line with this purpose, during the executive sessions of the workshop, intense discussions are involved, and strategies/experiences are shared in five critical modules, namely terminal security, machine learning applications in aviation, contemporary managerial tools in aviation, aviation analytics, and sustainability in future aviation. This initiative is expected to contribute to the goal of raising competent air transport professionals equipped with the 21st-century skills to operate, manage and maintain the European air transport industry.

I would like to express my sincere thanks to the partners of this International Workshop, Eskişehir Technical University, Hochschule Worms, University of Applied Sciences, and Estonian Aviation Academy for their collaboration and valuable contributions. In addition, I would like to thank the keynote and industry speakers for their kind availability and collaboration. And especially, I would like to thank the supporting organizations, Directorate General of Civil Aviation and TAV Airports Holding, for their precious support for the workshop.

Hoping all of you enjoy this workshop, the shared ideas, and the information.

Savaş S. ATEŞ
Chair of the NextGenATM Workshop

# ABOUT THE NEXTGENATM PROJECT

The NextGenATM project aims to develop a supportive digital learning platform in order to equip next generation air transport managers with future managerial skills compatible with 21st-century skills. The NextGenATM platform will include online courses, aviation industry expert talks, and collaborative digital student works. Thus, the platform will provide an innovative learning environment and contemporary content in order to strengthen the employability of European youth in the aviation industry.

In order to meet both the needs of youth and the expectations of the aviation industry, several meetings and workshops will be organized. This international workshop is also one of these events bringing all stakeholders together. These meetings and workshops will help the NextGenATM platform to produce the desired results. Due to these transnational meetings, contemporary learning content will be created by the project partner organizations in accordance with the needs of the industry and youth.

As a result of the project, NextGenATM digital learning platform, which will offer aviation management education in an innovative way, will be established. During the implementation of the project, online courses, aviation industry expert talks, and collaborative digital student works content will be presented to the youth. New content will continue to be developed with the participation of new stakeholders even after the project ends, and the platform will be sustainable by providing free access to all air transport management enthusiasts.

The NextGenATM project is being performed under the collaboration of Eskişehir Technical University, Hochschule Worms, University of Applied Sciences, and Estonian Aviation Academy.

Please follow the updates on NextGenATM and access the digital learning platform on air transport management from the link below.

www.nextgenatm.org

NextGenATM
Next Generation
Air Transport Management

# WORKSHOP PROGRAM

| August 30, 2022 – Tuesday | |
|---|---|
| **Organizing Committee**<br>**Executive Sessions on NextGenATM Modules** | |
| **August 31, 2022 – Wednesday** | |
| **09:00 - 10:00** | Registration |
| **10:00 - 10:30** | TAV Technologies Technical Trip |
| **10:30 – 10:45** | Opening Speech<br>Önder GÖĞEBAKAN<br>TAV Technologies, CTO |
| **10:45 – 11:00** | Opening Speech<br>Prof.Dr. Tuncay DÖĞEROĞLU<br>Rector of Eskişehir Technical University |
| **11:00 – 11:15** | Opening Speech<br>İbrahim ERMİŞ<br>Directorate General of Civil Aviation (DGCA),<br>Acting Head of Rulemaking and Training Department |
| **11:15 – 11:30** | Corporate Briefing Presentation<br>Assoc.Prof.Dr.Savaş S. ATEŞ<br>Eskişehir Technical University, Aviation Management Department |
| **11:30 – 11:45** | Corporate Briefing Presentation<br>Prof.Dr. Frank FICHERT<br>Hochschule Worms, University of Applied Sciences, Aviation Management Department |
| **11:45 – 12:00** | Corporate Briefing Presentation<br>Ph.D. Allan NÕMMIK<br>Estonian Aviation Academy, Aviation Management Department |
| **12:00 - 13:30** | Lunch |
| **13:30 - 14:00** | Session I Presentation I<br>M. Vefa ARIKAN<br>HEAŞ Academy Head of Training |
| **14:00 - 14:15** | Break |
| **14:15 - 14:45** | Session I Presentation II<br>Jean-Louis RAOUL<br>NMS Lab (NeoMetSys) |
| **14:45 - 15:00** | Break |

| | |
|---|---|
| **15:00 - 15:30** | Session I Presentation III<br>Gökhan KOÇ<br>TAV Technologies |
| **15:30 - 15:45** | Break |
| **15:45 - 16:15** | Session I Presentation IV<br>Assoc.Prof.Dr. Mustafa ASLAN, Assoc.Prof.Dr. Didem RODOPLU<br>İstabul Gelişim University, Kocaeli University |
| **September 01, 2022 – Thursday** | |
| **10:30 - 11:00** | Session II Presentation I<br>Ph.D. Allan NÕMMIK<br>Estonian Aviation Academy |
| **11:00 – 11:15** | Break |
| **11:15 – 11:45** | Session II Presentation II<br>Osman ÜLKEBAŞ, Eray Evren CORUK, Hazar SUNAY<br>Aviation for All Association |
| **11:45 – 13:30** | Lunch |
| **13:30 – 14:00** | Session II Presentation III<br>Prof.Dr. Frank FICHERT,<br>Hochschule Worms, University of Applied Sciences |
| **14:00 - 14:15** | Break |
| **14:15 – 14:45** | Session II Presentation IV<br>Umut Mert ARIKAN, Buse SODACI<br>Eskişehir Technical University, Civil Aviation Student Club |
| **14:45 - 15:00** | Break |
| **15:00 - 15:30** | Session II Presentation V<br>Asst.Prof.Dr. Harun YILMAZ<br>İskenderun Technical University |
| **15:30 - 15:45** | Break |
| **15:45 - 16:15** | Discussions and Closure Session |

Note: All activities will be held at TAV Technologies headquarters.

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# The Role of Sector-Based Aviation Academies for Future Air Transportation for Youth

**Vefa Arıkan**

HEAŞ Academy, Türkiye

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**Abstract**

Similar to the rest of the world, the civil aviation industry in Türkiye has experienced significant growth. Apart from the devastating effects of the COVID-19 pandemic, both the number of passengers carried and the fleet growth rate increased. This growth also causes the need for a skilled workforce in the aviation industry. Therefore, the aviation business needs to employ a professional and skilled labor force. While higher education institutions have traditionally played a key role in equipping industries with the skilled employees they require, sector-based academy programs are also critical for a trained workforce today. Sector-based aviation academies are effective programs that support aviation businesses in creating a skilled workforce. Such efforts assist aviation businesses in creating a workforce with the needed skills to maintain and grow their business immediately or in the near future. Today, many aviation companies, such as HEAŞ, invest heavily in aviation-based academies and focus on these areas. While academic institutions provide MBA, master's, and doctoral programs in aviation management, the involvement of industry-related lecturers is negligible in this area. Therefore, academic applications are not integrated with the industry and are far removed from real-world applications. To address this issue, sector-based aviation academies are developing innovative solutions such as university collaborations, part-time student programs, intern student programs, and joint aviation management graduate programs. Furthermore, these academies play an important role in collaborations with national aviation authorities and global institutions. Consequently, sector-based aviation academies are crucial for creating a highly qualified aviation workforce and equipping future aviation professionals with relevant abilities. This study focuses on the strategic importance of sector-based aviation academies and provides insights into opportunities in this field.

**Keywords:** Sector-Based Academy Program, Training, Aviation Management, Collaborations.

**Vefa Arıkan**

Vefa Arıkan works as the head of training at HEAŞ Academy. In 1999, Arıkan earned a Bachelor of Science in Physics Engineering from Istanbul Technical University. He completed his master's degree in the field of International Business Administration at Istanbul University in 2000. Arıkan also holds an M.Sc. in Air Transport Management (MIT & Cranfield & Columbia & Boeing) from Istanbul Technical University. He is currently a Ph.D. candidate in the field of Production & Operations Management at Istanbul University. Moreover, he has lectured in various courses at Bahceşehir University.

# Needs & Trends in Air Transportation Management Skills

**Jean-Louis Raoul**

NeoMetSys, France

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**Abstract**

The skills required for Air Transportation Management have continually evolved with the increase in passenger and freight volumes, the development of technologies, and the evolution of practices. In this study, we examine what has happened in order to extrapolate future developments and anticipate the skills required for aerospace and aviation professionals. The observed traffic growth caused a race for productivity and automation, imposed the organization of flows of services, and necessitated the development of software support tools. This automation was enabled by the constant evolution of information systems driven by the increasing volume of data. Meanwhile, practices were evolving towards preventive actions, promotion of cooperation, and overall optimization. The future air transportation system will be more open and will therefore produce more data to crunch. It will have to deal with new airspace users (cf. development of Higher Airspace Operations and Urban Air Mobility) and will address new aircraft types and new constraints. We can also expect transport equipment to become more autonomous, involving less Air Traffic Control and more flow management. The appearance of new stakeholders will lead to new needs and increased collaboration. Technological developments will encourage the emergence of new service providers. The evolution of passenger/citizen expectations will also require more collaboration, more transparency, and more constraints. All these trends lead to the professionalization of data flow management with a range of specializations and the implementation of data trading (not just data sharing). It will come with a higher level of quality insurance and the development of data analytics based-tools, including predictive analysis, and decision support tools. The stakeholders have to define new goals: innovate to create automated services and build on collaboration. The skills required are no different from those of the industry in general: information management, data valorization, and human-robot collaboration. This study examines past and present evolutions in order to extrapolate future developments and anticipate the skills required for aerospace and aviation professionals. It aims to present a new perspective on this issue.

**Keywords:** Skills, Air Transport Management, Flow Management, Data Analytics.

**Jean-Louis Raoul**

Jean-Louis graduated from ESME Sudria (France) in 1986 and has oriented his career toward the aviation sector by joining Thales Air Systems. He has been involved in every phase of the development of large Air Traffic Control systems, from specification to integration and validation. He worked on various projects for The Netherlands, France, Mexico, and Ireland. In 1997, he expatriated to Türkiye as the manager of the Thales subsidiary developing software for ATC. He joined Neosys in 2001 and was assigned to different missions for Thales, DSNA, Eurocontrol, and EUROCAE. In 2004, he was a member of the Eurocontrol team developing the Airport-Collaborative Decision Making concept. He supports the Stockholm Arlanda A-CDM project and facilitates EUROCAE standardization work as the secretary of Working Group 69. He is involved in several innovation and standardization projects. In 2013 he supported Abu Dhabi A-CDM implementation project with IBG and took part in the Airport Operations Control Centre project for Riyadh Airport.

# Ground Handling Roster Optimization Simulations with Different Employee Skill Sets

**Gökhan Koç[1], Mehmet Ali Tüysüz[1], Ferit Öçaldı[1],**

**Ezgi Nostar Kolancalı[1], Gönül Gökçe Çevik[1]**

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**Abstract**

Ground handling services are essential to the operation of aircraft in the air transportation system. There are specific plans for an effective ground handling service, one of which is the ground handling service resource plan. Ground handling service resource planning process at airports has three different steps: (1) pre-planning with resource needs forecasts for the future seasons, (2) real-time task assignment, (3) and weekly and monthly roster creation. The first and most complex stage of this process is pre-planning. This is due to unknown flight plans for the forthcoming seasons and employee attendance status. AI algorithms can estimate flight plans using historical data. Still, the same flexibility does not exist for resource status predictions because ground handling companies assign employees according to the pre-planning results. In addition, the required workforce depends on the existing qualifications of those human resources and the capabilities that can be gained through training. In this study, roster product optimization algorithms of TAV Technologies were used. This study analyses the ratio that a company can cover sample workload by assigning the minimum number of employees with the minimum training load and provides a solution for ground handling planning processes.

**Keywords:** Roster, Preplanning, Optimization, Simulation, Training Load.

**Gökhan Koç**

Gökhan Koç received a Bachelor of Science (BS) in Electronics Engineering from Istanbul Technical University in 2008. In 2013, Koç received a master's degree in Electrical and Electronics Engineering from Yeditepe University. Currently, he is pursuing a doctorate in Electrical and Electronics Engineering. Specializing in subjects such as Requirement Analyzes, Circuit Design & Development, and Product Design & Development, Koç works as an associate researcher and development manager at TAV Technologies.

**Mehmet Ali Tüysüz**

Mehmet Ali Tüysüz completed his Electrical and Electronics Engineering undergraduate degree at Bilkent University in 2018. He did summer internships at various companies. He works as a Software Developer at TAV Technologies.

**Ferit Öçaldı**

Ferit Öçaldı received his Bachelor's degree from Dokuz Eylül University. Öçaldı, who has been working at TAV Technologies for a long time, now works as a software development assistant manager in the same company.

**Ezgi Nostar Kolancalı**

Ezgi Nostar Kolancalı graduated from Bilkent University in 2016 with a degree in computer engineering. Moreover, Kolancali earned her master's degree in Business Information Systems from Boğaziçi University in 2020. She currently works as a product owner for TAV Technologies.

**Gönül Gökçe Çevik**

Gönül Gökçe Çevik graduated from Ege University with a bachelor's degree in Computer Education and Instructional Technology. She works as a senior business analyst and scrum master.

# Management and Gen-Z

**Mustafa Aslan[1], Didem Rodoplu Şahin[2]**

[1]İstanbul Gelişim University, Department of Aviation Management

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**Abstract**

Management innovation took place whenever it was needed, as it happened back in the history of business. However, generations of baby boomer and Gen-X are over, and the ambitions of new generations are quite different than the preceding ones. This should cause us to stop and rethink the current situation. The current status quo is not sustainable because we are trying to manage new generations, especially Gen-Z, with the motivation theories of the 1940s-1950s and management theories of the 1960s, 1970s, 1980s, and 1990s. In order to prevent possible turbulences and crises of generational transition, scientists and practitioners ought to formulate new theories of motivation and management, which will meet the requirements of future generations. In this study, previous motivation and management theories are examined, considering the main characteristics of Gen-Z. It's also determined that the change in management theories will also require changing the organizational structures and organization theories to some extent as well. Lastly, it's also concluded that having proper organizational structure, management practices, and motivated employees during crisis times help organizations to reduce the total costs of the crisis.

**Keywords:** Management, Motivation, Gen-X, Gen-Y, Gen-Z, Generation Alpha.

**Mustafa Aslan**

Mustafa Aslan received his Bachelor's degree in Astronomy and Space Sciences from Ege University. He received his Ph.D. in Business Administration from Istanbul Arel University in 2020. He is currently working as a faculty member in the Department of Aviation Management at Istanbul Gelisim University. His main areas of interest include strategic management, human resource management, and organizational behavior.

**Didem Rodoplu Şahin**

Didem Rodoplu Şahin received her Bachelor's degree in Business Administration from Eastern Mediterranean University. Then she completed her master's degree in the field of Management Organization at Kocaeli University in 2001. Rodoplu Şahin earned his Ph.D. in Business Administration at Kocaeli University in 2006. She has been working for Kocaeli University since 1999. Currently, she is the head of the Department of Aviation Management at Kocaeli University. She has lectured on strategic management and aviation ethics in aviation and studies on strategic management.

# The New Generation of Aviation Managers: Competence, Efficiency, Proactive Thinking

**Allan Nõmmik**

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**Abstract**

As a result of technological developments, the European green revolution and various crises, the spatial pattern of air transportation is changing significantly in Europe and this, in turn, challenges the education of future air transport managers. Semi-structured interviews, conducted among senior and middle office specialists in small and medium-sized European airlines, showed a gap in cooperation and mutual understanding between specialists in operations and commercial departments. This clearly shows the need to prepare competent aviation professionals with a wide profile. Rapidly developing technologies and changing conditions in the air transport market present complex challenges to future airport management. With the help of case studies conducted, it became clear that the effectiveness and applicability of different technological solutions vary depending on the size of the airport, local legislation, and a number of other factors. It is also evident that many recent technology applications do not take into account passenger behavior to the required extent. In addition, the flexibility of an airport passenger service system, including the ability to react to unexpected changes, can be deemed insufficient. Often the problem comes from the quality of decisions made by managers at different levels at the airport. One of the solutions for the preparation of future managers in the field of air transport is the use of simulation in the learning process, combining the economic and operating sides. It would not only contribute to, for example, the evaluation of the suitability of technological solutions in terms of efficiency in the conditions of a specific airport, but also to better acquisition of educational material and, as a result, be the basis of the development of proactive thinking habits of future specialists.

**Keywords:** Competence, Efficiency, Proactive Thinking, Simulation-Based Modelling.

**Allan Nõmmik**

Allan Nõmmik graduated from Tartu Aviation College with a degree in Airport Management in 2000, received a master's degree in Human Geography from the University of Tartu in 2003, and a Ph.D. in Logistics and Transport from Tallinn University of Technology in 2020. In addition, he has completed a large number of courses in the field of aviation, education, and management. He has more than 20 years of teaching and supervision experience in various higher education institutions. The versatile education he received allows him to analyze processes in air transport from different perspectives. In recent years, his research interest, also reflected in his publications, is the complex airport capacity modeling. This includes airport infrastructure as well as accessibility and flight network planning. Another important research interest of his is the training of future aviation specialists, which would include both the field of operations and management in general.

# Air Transportation Data and Statistics

**Osman Ülkebaş[1], Eray Enver Coruk[1], Hazar Sunay[1]**

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**Abstract**

It is crucial to correctly interpret the information provided in the rapidly evolving and spreading field of air transportation. Today, while air transport has become an indispensable part of the global transportation industry, it is essential for the employees and managers of the sector to have certain abilities and skills. The most important of these abilities is data and information literacy. Although increasing automation systems and developing technologies minimize human-specific errors, accurate data assessment is needed to take the right steps in the ever-evolving sector. The data can be obtained from both air transport companies and individuals in the air transport system. Due to new data analyzing techniques and statistical approaches, air transport companies have the chance to make the right investments for their future and to respond to the needs of the stakeholders. It will be more important to make predictions based on big data in the future. The air transport industry, which is open to development more than other businesses, is also so fragile against uncertainty. As a matter of fact, the reason why airline transport companies frequently send surveys to their users is to review their current situation and to reveal opportunities by evaluating customer needs. In the aviation sector, where innovation is always at the forefront, the first qualification to be sought in managers and competent employees in the coming years will be the ability to manage data. As a result of this study, data and statistical applications for different stakeholders in the air transport industry were compiled and contributed to increasing the awareness of future air transport employees on this issue.

**Keywords:** Air Transportation, Statistics, Innovation, Data Science, Data Literacy.

**Osman Ülkebaş**

Osman Ülkebaş graduated from Anadolu University, Department of Airframe and Powerplant Maintenance, in 2016. He also holds a bachelor's degree in Business Management. He works at Turkish Airlines Technic as a B1 Licensed Aircraft Maintenance Engineer. He is the founder of the Aviation for All Association and chairman of this association.

**Eray Enver Coruk**

Eray Enver Coruk received his Bachelor's degree from Anadolu University, Department of Airframe and Powerplant Maintenance, in 2016. Coruk currently works as a B1 Licensed Aircraft Maintenance Engineer at Turkish Airlines. He also acts as vice president of the Aviation for All Association.

**Hazar Sunay**

Hazar Sunay is continuing his undergraduate education in the Department of Language Interpretation and Translation and the Department of International Relations and Affairs. He works as International Marketing and Recruitment Assistant at Haliç University, Istanbul. He is a board member of the Aviation for All Association and responsible for the Public Relations and Publicity Department of the association.

# Sustainability – A Megatrend and Its Implications for Aviation

**Frank Fichert**

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**Abstract**

Sustainability is one of the 'megatrends' of the 21st century with substantial implications for aviation, in particular with respect to climate change. The European Union (EU) has set ambitious targets for reducing greenhouse gas emissions, leading to a large number of policy measures with a strong impact on the aviation industry. Some instruments have already been implemented (e.g., Emissions Trading Scheme (ETS) for $CO_2$ emissions), and others are envisaged for the future (e.g., mandates for using Sustainable Aviation Fuel, SAF). These EU-wide instruments are complemented by specific measures in some EU member states, e.g., ticket taxes or an expansion of the high-speed rail network. Moreover, a growing number of customers, as well as potential employees, expect airlines and airports to act in a sustainable way. Against this background, this study has emphasized the role of sustainability in aviation education. It is important that sustainability-related topics are included in aviation training, education, and study programs in a comprehensive way. Several programs already address sustainability topics in dedicated lectures or modules. These modules might cover the scientific aspects of different environmental topics (e.g., aircraft noise, greenhouse effect), technical options to reduce environmental effects (e.g., flight procedures, SAF), an analysis of the political framework (e.g., noise surcharges, ETS), as well as principles and applications of sustainability management. In addition, sustainability should be a fully integrated part of (almost) all applied modules, including (but not limited to) lectures or courses on airline/airport management, aircraft operations, human resources, airline/airport marketing, maintenance, and (non-financial) reporting. This will enable future employees of airlines, airports, and other providers of aviation-related products or services to fully understand the effects of their work on sustainability, to make appropriate decisions, and thereby also contribute to the long-term success of the entire industry.

**Keywords:** Sustainability, Air Transport Industry, Aviation Management Programs.

**Frank Fichert**

Frank Fichert (Prof. Dr.) is a Professor of Economics and Transport Economics at Worms University of Applied Sciences. His Ph.D. thesis, which he finished in 1999 at Mainz University, analyses different policy instruments for reducing negative externalities from air transportation. He worked as managing director of the Research Institute for Economic Policy at Mainz (1999-2004) and as a Professor of Economics and Air Transportation at Heilbronn University of Applied Sciences (2004-2009). He has published several papers on the transport sector and is co-author of the leading German textbook on air transport management. He is a member of the Competence Centre Aviation Management at Worms University and program director of the Bachelor's degree program "Aviation Management and Piloting". He has participated in several applied research projects, including the EU H2020 projects COCTA and CADENZA. His research focuses on competition and regulation in the air transport industry and the environmental issues of aviation.

# Expectations of Youth from the Educational and Industry Organizations in the Future Air Transportation

**Umut Mert Arıkan[1], Buse Sodacı[1]**

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**Abstract**

Eskişehir Technical University Civil Aviation Student Club (CASC) is a student club established in 2018. The student club, which currently has more than 500 student members, is the largest university student club in the field of civil aviation in Türkiye. The purpose of this student community is to organize conferences, trainings, technical trips, and social activities in the field of air transportation. In most of the events organized, invited representatives of the air transport industry also take part. In this respect, CASC strives to maintain and strengthen both student-university and student-industry links. Since its members are mostly university students studying at undergraduate and vocational levels, CASC aims to contribute to the versatile development of young people in the field of air transport. In this context, this study was conducted to determine the expectations of young people from educational and industry organizations regarding the future of air transportation. In this study, young CASC members participated, and semi-structured interviews were conducted to determine the expectations of young people. The data collected as a result of the interviews were analyzed using qualitative data analysis methods. As a result, the expectations of young people from educational institutions and industrial organizations have been determined separately. In order to build a successful career in the future air transportation system, the expectations of young people from educational institutions are (1) improving soft skills, (2) micro-credentials that will enable them to obtain an interdisciplinary perspective, (3) harmonizing the curriculum with current sectoral practices, (4) and learning basic information about data analytics. The expectations of the youth from the air transport industry are (1) to get sectoral career consultancy support, which is similar to the academic consultancy structure, (2) to get mentorship support from experts working in the industry, (3) to build a program in which businesses will identify potential employees among senior students and subject them to next level sectoral academy training. On the other hand, it was determined that the students are also aware of what the industry expects from them. These requirements of the industry are such as social skills, informatics, software, and data analysis. Within the scope of the study, insights that will contribute to the literature and be beneficial for the university and industry stakeholders were presented in terms of revealing the expectations of young people in the field of air transportation.

**Keywords:** Eskisehir Technical University, Civil Aviation, Student Club, Future Air Transport, Expectations of Youth.

**Umut Mert Arıkan**

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# Improving the Quality of Aviation Management Education

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**Abstract**

Technology in the aviation industry is constantly evolving. However, the human that will use technology is still an important factor. One of the main factors for the safety, security, and efficiency of the services offered in the air transport industry is trained and competent personnel. Minimizing accidents and incidents, avoiding illegal acts, and efficient operations can be achieved through the knowledge and experience of the working personnel. The training activity, which is carried out systematically in the air transport sector, positively affects the personal development of individuals as well as their professional development. In order to improve the quality of education, institutions need to develop their physical, social, and cultural resources and opportunities. In addition, bringing the cooperation between the educational institution and the sector to a sustainable level will provide a significant increase in quality. Another factor that will improve the quality of education is the presence of educational personnel with knowledge and skills. One of the departments at the Bachelor's degree, which provides the training of most of the personnel who will perform the professions in the air transport industry, is the Department of Aviation Management. In the Aviation Management Department, vocational training is provided for operational and administrative fields in the industry, especially ground handling, airline management, airport, and terminal management. Improving the quality of the training provided in accordance with international and national standards and regulations will directly contribute to the operational safety, security, and efficiency of the air transport industry. In this study, it is aimed to reveal the importance of improving the quality of education given in the Department of Aviation Management. In line with this purpose, the responsibilities of institutions, individuals, and authorities are mentioned. The most important factor in improving the quality of education provided in universities is the necessity of being practical as well as theoretical. In order to achieve this, cooperation between the university and the industry should be initiated, and it should be made sustainable.

**Keywords:** Air Transportation, Education, Training, Aviation Management.

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*In the modern world, it is necessary to adapt to new developments and technologies in all areas of life, including business and education. The necessities of the current era, which is characterized by a focus on knowledge and information, require individuals and organizations to continually evolve and change. Just like all other businesses, the air transportation industry must adapt to the requirements of the global scale change. In the aviation industry, staying up-to-date with technology and innovation is important for remaining competitive. To do this, companies in this industry must adapt to the requirements of the knowledge economy. The air transport industry needs employees equipped with crucial 21st century skills in the main areas of learning, literacy, and life skills in order to meet the requirements of the knowledge era. The responsibility to ensure that future employees are equipped with these essential skills and the role to provide the necessary training and development for success in this profession falls to both educational institutions and businesses in the air transportation system.*

*The International Workshop on "Skilling Youth for the Next Generation Air Transport Management" is a multi-stakeholder event that brings together educational institutions, industry representatives, and young people in order to take steps to equip young people with 21st century skills in line with the requirements of the era we live in. This event is an activity within the Erasmus+ 2021-2-TR01-KA210-YOU-000048913 youth project. It is expected that the findings of this project, which is being carried out by a collaboration between Eskişehir Technical University, Hochschule Worms, University of Applied Sciences, and Estonian Aviation Academy, would assist young people in their future career in the field of air transport management.*

*The studies covered in this book are expected to be useful in creating future education policies, meeting the demands of the 21st century, improving collaboration between industry and universities, and strengthening the employability of young people in the air transport industry.*

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