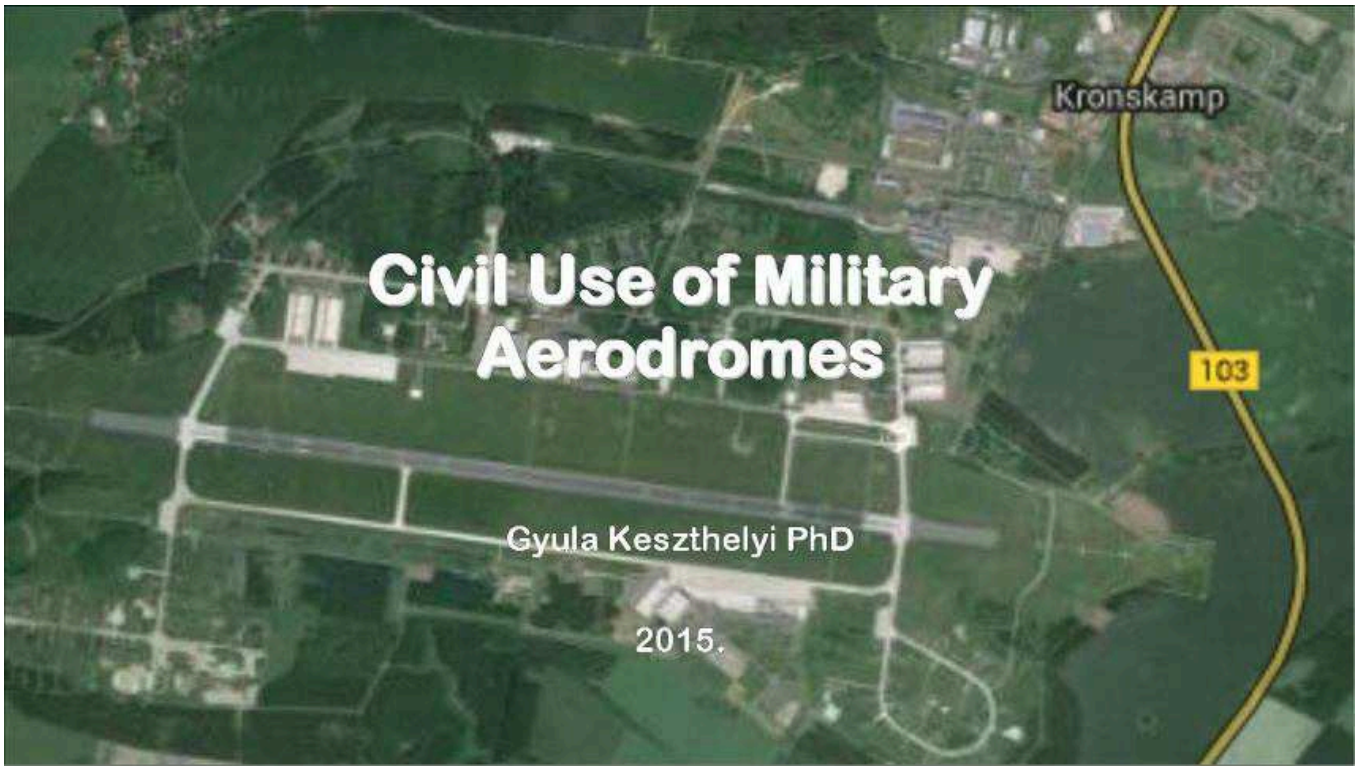


Civil Use of Military Aerodromes

Gyula Keszthelyi PhD

2015.

AGENDA

- EUROCONTROL forecast (EUROCONTROL Guidelines Supporting the Civil Use of Military Aerodromes)
- Aerodrome network in Hungary
- Potential benefits of civil use of military aerodromes
- Conclusion

EUROCONTROL FORECAST

- EUROCONTROL STATFOR1 Long Term Forecast, ed. 2008, the forecast for traffic growth is:
  - between 16.5 and 22.1 million Instrument Flight Rules (IFR) flight movements in the EUROCONTROL Statistical Reference Area (ESRA) in 2030
    - average growth of 2.3%-3.5% per year
    - Consequences:
    - the number of unaccommodated demand grows rapidly from 0.9 million flights in 2025 to 2.3 million flights by 2030, meaning that 11% of flights will not be accommodated on current planning
    - expected aviation growth will not be possible, with a likely significant impact on the economy of the ECAC States
    - there is a strong need for action, to identify and implement feasible solutions to further increase overall airport capacity to ensure the safe and efficient accommodation of the estimated number of flights in the years to come

POSSIBLE SOLUTION

1. Improve airport infrastructure, facilities and procedures:
   - ❖ increasing capacity at existing airports → currently in progress (these are not sufficient to accommodate the identified future increase in traffic demand).
2. Building of new airports or additional runways at existing airports:
   - ❖ it is not always a viable solution due to the environmental impact on the surrounding lands and population, in terms of emissions, air quality and noise.
3. It is necessary to identify and implement alternative solutions in the medium and long term to provide the required additional capacity:
   - ❖ for example the further development and use of existing local or regional airports.
4. Civil use of military aerodromes:
   - ❖ could offer extra airport capacity to the overall aviation system,
   - ❖ making use of infrastructure and services already in place.

AERODROME NETWORK OF HUNGARY

PUBLIC, INTERNATIONAL, COMMERCIAL AIRPORT

	Name of airport	Length of runway and type of pavement
1.	Budapest Liszt Ferenc Nemzetközi Repülőtér	3.010 × 45 m (concrete) 3.707 × 45 m (concrete)
2.	Debreceni nemzetközi repülőtér	2.500 x 40 m (concrete)
3.	Győr–Pér repülőtér	2.030 × 30 m (concrete)
4.	Sármellék nemzetközi repülőtér	2.500 × 60 m (concrete)
5.	Pécs–Pogány repülőtér	1.500 m (concrete)

PUBLIC AIRPORTS

	Name of airport	Length of runway and type of pavement
1.	Meidl Airport Fertőszentmiklós	985 × 23 m (concrete)
2.	Nyíregyházi repülőtér	1000 × 20 m (concrete) 1000 × 60 m (grass)
3.	Siófok-Kiliti repülőtér	1250 × 50 m (grass)

MILITARY AIRPORTS

	Name of airport	Length of runway and type of pavement
1.	MH 59. Szentgyörgyi Dezső repülőbázis, Kecskemét	2.500 x 60 m, (concrete)
2.	MH Pápa Bázisrepülőtér, Pápa	2.399 x 60 m, (concrete)
3.	MH 86. Szolnok Helikopterbázis, Szolnok	2.000 x 70 m, (concrete) 2.000 × 100 m (grass)
4.	Taszár	2.500 × 60 m (concrete)

Non-public airports (overall: 43)

	Name of airport	Length of runway and type of pavement
1.	Békéscsabai repülőtér	1.300 × 30 m (concrete), 790 × 40 m (grass)
2.	Kalocsai repülőtér	2.500 × 60 m (concrete), 1.900 × 300 m (grass)
3.	Kaposújlaki repülőtér	610 × 18 m (concrete), 1.200 × 200 m (grass)
4.	Kiskunlacházi repülőtér	2.500 × 45 m (concrete)
5.	Szegedi repülőtér	1.185 × 30 m (concrete), 1.177 × 50 m (grass), 610 × 50 m (grass)
6.	Tököli repülőtér	2.500 × 60 m (concrete), 1.100 × 50 (grass)

ABANDONED AIRPORT

	Name of airport	Length of runway and type of pavement
1.	Csákvári repülőtér	2.000 x 20 m (concrete)
2.	Kunmadarasi repülőtér	2.500 x 80 m (grass)
3.	Mátyásföldi repülőtér	2 db, kb. 900 m (artificial grass)
4.	Mezőkövesdi repülőtér	3.500 x 80 m(concrete)
5.	Szentkirályszabadja (BudaWest Airport)	2.000 x 60 m (concrete)

CLASSIFICATION OF AERODROMES BY THEIR RUNWAY LENGTH

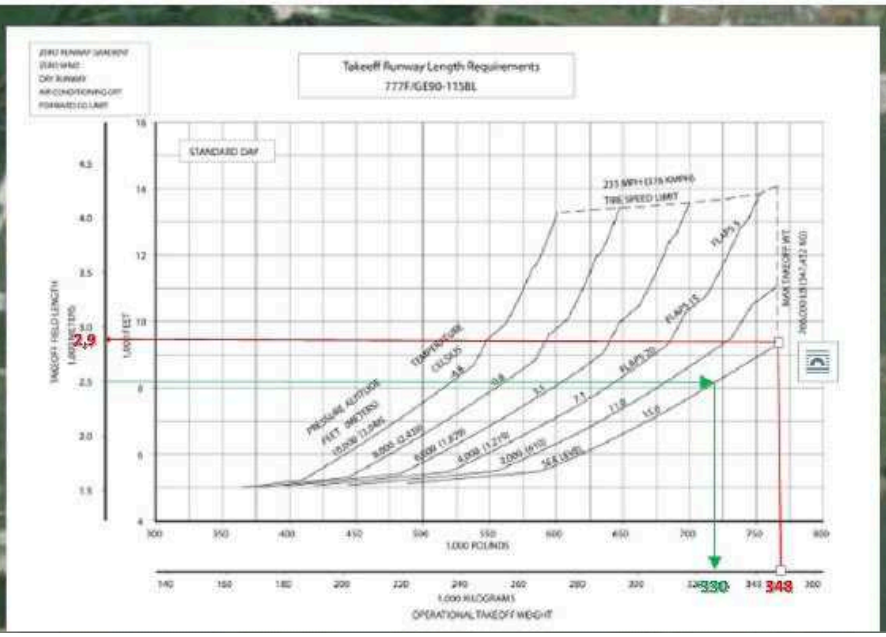
Length of runway (m)	Public international	Non-public	Military	Abandoned	Summa
	Quantity				
Over 3501	1	0	0	0	1
3001-3500	1	0	0	1	2
2501-3000	0	0	0	0	0
2000**-2500	3	3	4	3	13
1500-1999	1	0	0	0	1

**Lower limit has been degreased for including runways with 2.000 m length

General Characteristics: BOEING-777F

CHARACTERISTICS	UNITS	Boeing 777-F
MAX DESIGN TAXI WEIGHT	KILOGRAMS	348,722
MAX DESIGN TAKEOFF WEIGHT	KILOGRAMS	347,815
MAX DESIGN LANDING WEIGHT	KILOGRAMS	260,816
MAX DESIGN ZERO FUEL WEIGHT	KILOGRAMS	248,115
MAX STRUCTURAL PAYLOAD	KILOGRAMS	103,737
USABLE FUEL	KILOGRAMS	145,538

F.A.R. Takeoff Runway Length Requirements - Standard Day: Model 777F (GE90-115BL Engines)



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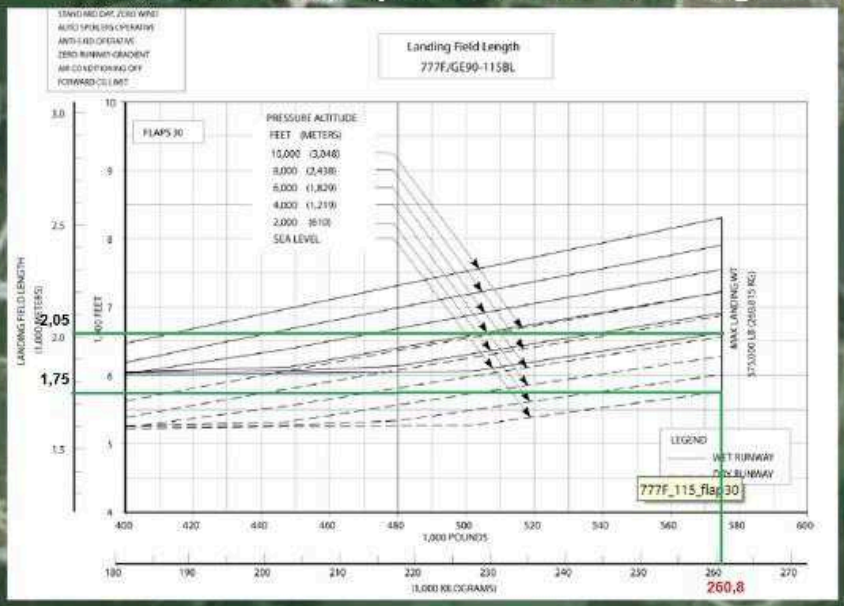
F.A.R. Landing Runway Length Requirements - Flaps 30: Model 777F (GE90-115BL Engines)

Kronskamp



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THE MAIN AERODROMES IN HUNGARY

RESPONSIBILITY OF CIVIL USE OF MILITARY AERODROMES

- Military aerodromes are operated primarily to serve armed forces
- The decision to allow civil operations is an exclusively national prerogative since defense matters are a State responsibility, and
- Decision is normally made between the competent civil and military State authorities.

POTENTIAL BENEFITS OF CIVIL USE OF MILITARY AERODROMES

- Additional Airport Capacity:
  - military aerodromes might have latent capacity and infrastructure that could be made available for the benefit of civil aviation;
  - could allow the distribution of the increasing number of flights to a wider number of airports, thereby enhancing overall airport capacity and contributing to the alleviation of the forecast airport capacity shortfall at large and medium-sized airports for the benefit of the overall air transport system;
  - relocation of specific categories of civil flights (for example low-cost, general aviation, business aviation, cargo, etc.) to military aerodromes could unlock extra capacity at major hubs/airports.

POTENTIAL BENEFITS OF CIVIL USE OF MILITARY AERODROMES

Operational Benefits

- could reduce delays to the Air Traffic Management network caused by ground congestion or landing sequences at airports with a high density of traffic;
- both civil and military personnel involved in aerodrome operations could acquire and maintain an ability to operate in, and provide services for, a mixed civil-military aviation environment;
- military air traffic controllers may benefit from gaining familiarity with General Air Traffic (GAT) operations and procedures as well as achieving and maintaining the ability to operate in a mixed GAT/OAT2 environment, especially in the light of possible deployment to operational theatres

POTENTIAL BENEFITS OF CIVIL USE OF MILITARY AERODROMES

Environmental Benefits:

- could reduce the need for new infrastructure, such as additional taxiways, runways, aprons and buildings, at civil aerodromes;
- military aerodromes are often dislocated from cities and villages, therefore the environmental impact of increased air operations on surrounding communities in terms of noise, emissions and particle matter could be mitigated and help alleviate the environmental impact around major hubs;
- any associated reduction in taxi-time delays might also bring added environmental benefits in terms of emissions.

POTENTIAL BENEFITS OF CIVIL USE OF MILITARY AERODROMES

- **Societal and Economical Benefits:**
  - could support the dispersal of the European transport system across States' territories for the benefit of the population and local/national economy;
  - benefits are envisaged for local companies/factories increasing their ability to move goods and products more rapidly;
  - increased commercial aviation activities associated may provide new job opportunities and contribute to the growth of the local economy;
  - the possibility is provided to establish or increase aviation-related tourist flows;

POTENTIAL BENEFITS OF CIVIL USE OF MILITARY AERODROMES

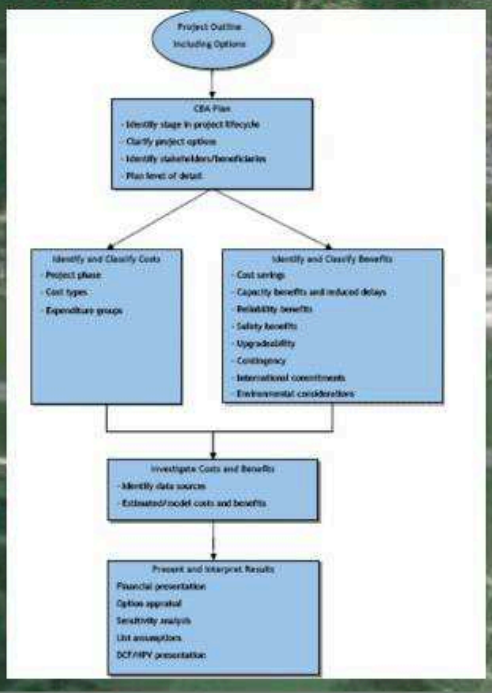
Societal and Economical Benefits cont.:

- for civil aviation, specifically General Aviation, operating at military aerodromes, costs such as parking and landing fees might be lower than those at major airports/hubs;
- brings potential cost recovery benefits for the military.

Civil-Military Interoperability Benefits:

- will enhance civil-military interoperability and
- may bring better harmonization in terms of Communication/Navigation/Surveillance (CNS), ground equipment and procedures;
- suitably-certified civil systems and infrastructure should be installed or adapted to comply with the provisions described in ICAO Annex 14 'Aerodromes' for GAT operations at airports.

COST-BENEFIT ANALYSIS TEMPLATE



CONCLUSIONS

- Civil use of military aerodromes is well-established in several European States.
- It has developed on an *ad hoc* basis over time to meet particular local requirements.
- Depending on the emerging Single European Sky II regulatory environment and in the light of the forecast pressures on airport capacity, under appropriate financial and operational conditions agreed between military and civil authorities, there may be an opportunity to utilize spare capacity at military aerodromes for commercial operations in the wider public interest.

CONCLUSIONS

- Where a military aerodrome is designated to also support civil aviation operations, the military authorities responsible for the aerodrome and the civil organizations and companies willing to make use of it should clearly make available the legal, operational, technical and financial framework allowing safe and efficient mixed civil-military operations.
- In any case the priority of military operation must be ensured by the civilian users.


ROSTOCK- LAAGE AIRPORT
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2015. 07. 12.


Kecskemét Military Aerodrome
Kecskemét Air Base
Reptéri út
2015. 07. 12.
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Thank you for your attention