

ATC Commercialization Policy: Has It Been Effective?

Presentation to the McGill/ICAO Symposium
on Air Navigation

by

Glen McDougall

Senior Fellow, George Mason University, USA

&

President, MBS Ottawa Inc, Canada

Background

- ❑ Objective of study to provide unbiased information for policy-makers
- ❑ Looks at performance of ten commercial Air Navigation Service Providers (ANSPs) from 1997 to 2004 compared to non-commercial ANSP (the FAA)
- ❑ All ANSPs fully participated
- ❑ Managed by former Canadian Government official who managed design of NAV CANADA
- ❑ Team included three universities – McGill Institute of Air & Space Law in Montreal; George Mason University in Virginia; the Maxwell School of Syracuse University in New York

Background: Definition of Commercialization

- ❑ Range of organizational options that introduce business practices
- ❑ Financial autonomy a prerequisite
- ❑ Sample included:
 - Government department with user fees, access to capital markets and autonomous budgets
 - Separate government agency
 - Six variants of government-owned corporation
 - Public-private partnership: 49% owned by government, control to Airline Group
 - Non-profit, private corporation: airlines, business aviation, unions & government as members, with stakeholder-appointed, arm's-length board

Background: The Sample

- Airservices Australia
- NAV CANADA
- DSNA France
- DFS Germany
- Irish Aviation Authority
- LVNL Netherlands
- Airways New Zealand
- ATNS South Africa
- Skyguide Switzerland

- NATS UK
- FAA/ATO USA

- Government Corporation
- Non-Profit Private Corp
- Dept w Fin. Autonomy
- Government Corporation
- Government Corporation
- Government Agency
- Government Corporation
- Govt-owned Public Co.
- Govt-owned Non-Profit Joint stock Corp(99.9%)
- Public Private Partnership
- Government Department

Comparability: Size

- Large difference between volume of US system compared to any other:
 - US has 6 times IFR traffic as Canada (18.6M movements vs 3.6M), 8 times that of Germany, France or UK
 - Cleveland Center handles 3.0 million IFR movements, almost same as Canada
 - VFR traffic extensive in US
- However, outputs of FAA similar to outputs of commercial ANSPs (ICAO), volume is scalable
- Study found FAA faces identical governance issues and has identical opportunities – but greater impact
- Project concerns good governance, and like ethics, governance principles do not change with size

International Perspective

- Funding from various sources:
 - CANSO, Airservices Australia, NAV CANADA, DFS Germany, Irish Aviation Authority, LVNL Netherlands, Airways NZ, NATS UK
 - IATA, ARINC
 - Transport Canada, European Commission SES, CAA UK
 - Donner Canadian Foundation, Searle Freedom Trust (US)
- International Advisory Committee:
 - Former FAA Administrator, past Vice-Chair of NTSB, founding member of EUROCONTROL Performance Review Commission, US GAO, IATA Director User Charges, CANSO SG, others

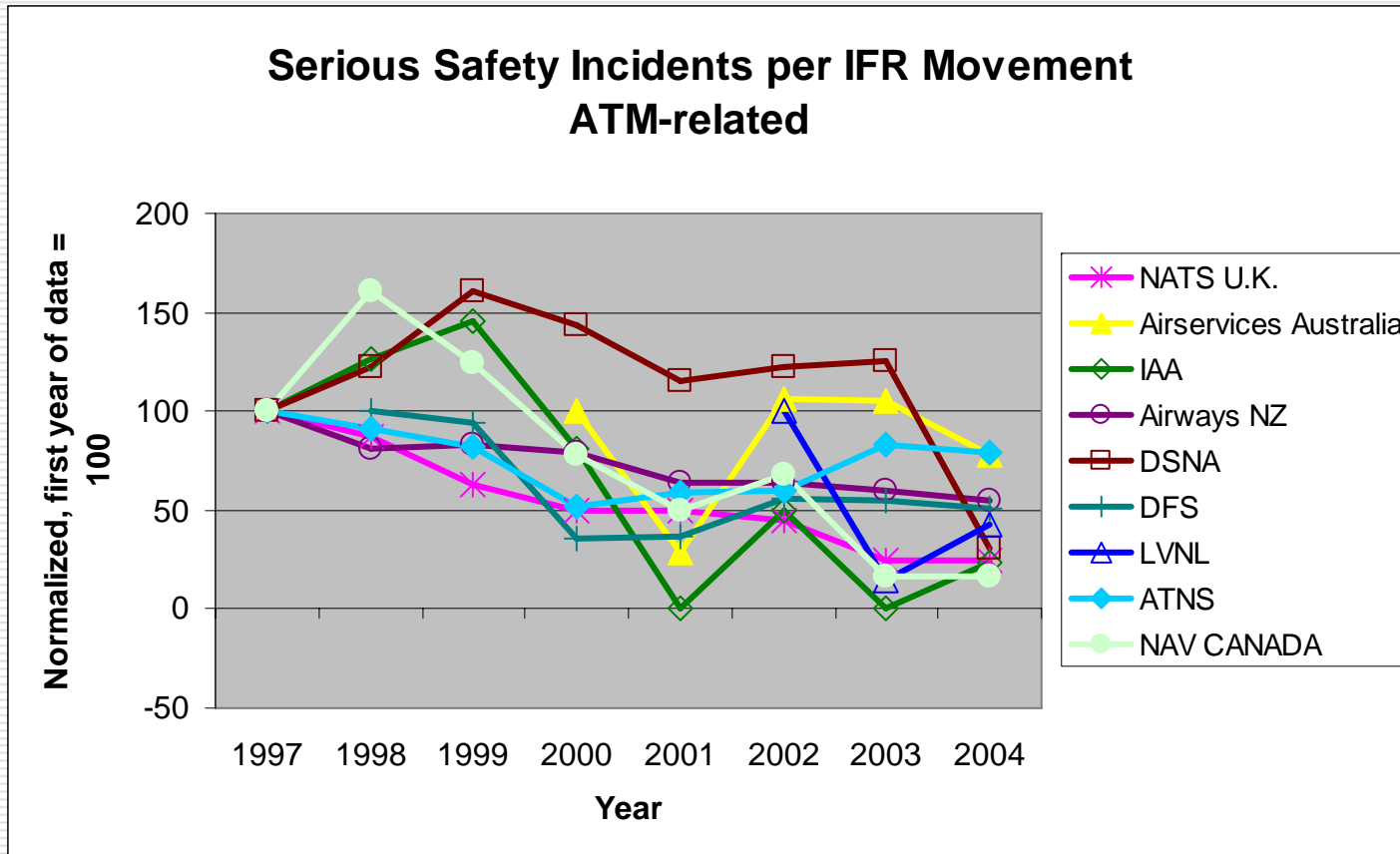
Three new bodies of work

- Legal Descriptions: by McGill University of governance structure and regulatory framework of each commercial ANSP, organized by topic:
 - In Annals of Air & Space Law 2006
- Qualitative Analysis: Over 200 interviews with ANSP management, unions, customers, regulators, military, tech suppliers, international agencies in cooperation with George Mason University
- Quantitative Analysis: Trend analyses of Key Performance Indicators by Syracuse University—safety, modernization, cost, service quality, public interest and financial stability

Findings: Safety

- ❑ Safety regulators and accident investigation boards confirm safety not compromised by commercialization
- ❑ Several safety regulators report improvement in safety culture, reliability of reporting & better visibility of safety issues
- ❑ Overwhelming support for separation of regulator from provider – removes conflict of interest
- ❑ Trends show decrease in serious safety incidents for 9 of 10 ANSPs
- ❑ Exception was Swiss ANSP
- ❑ No safety trend data for FAA

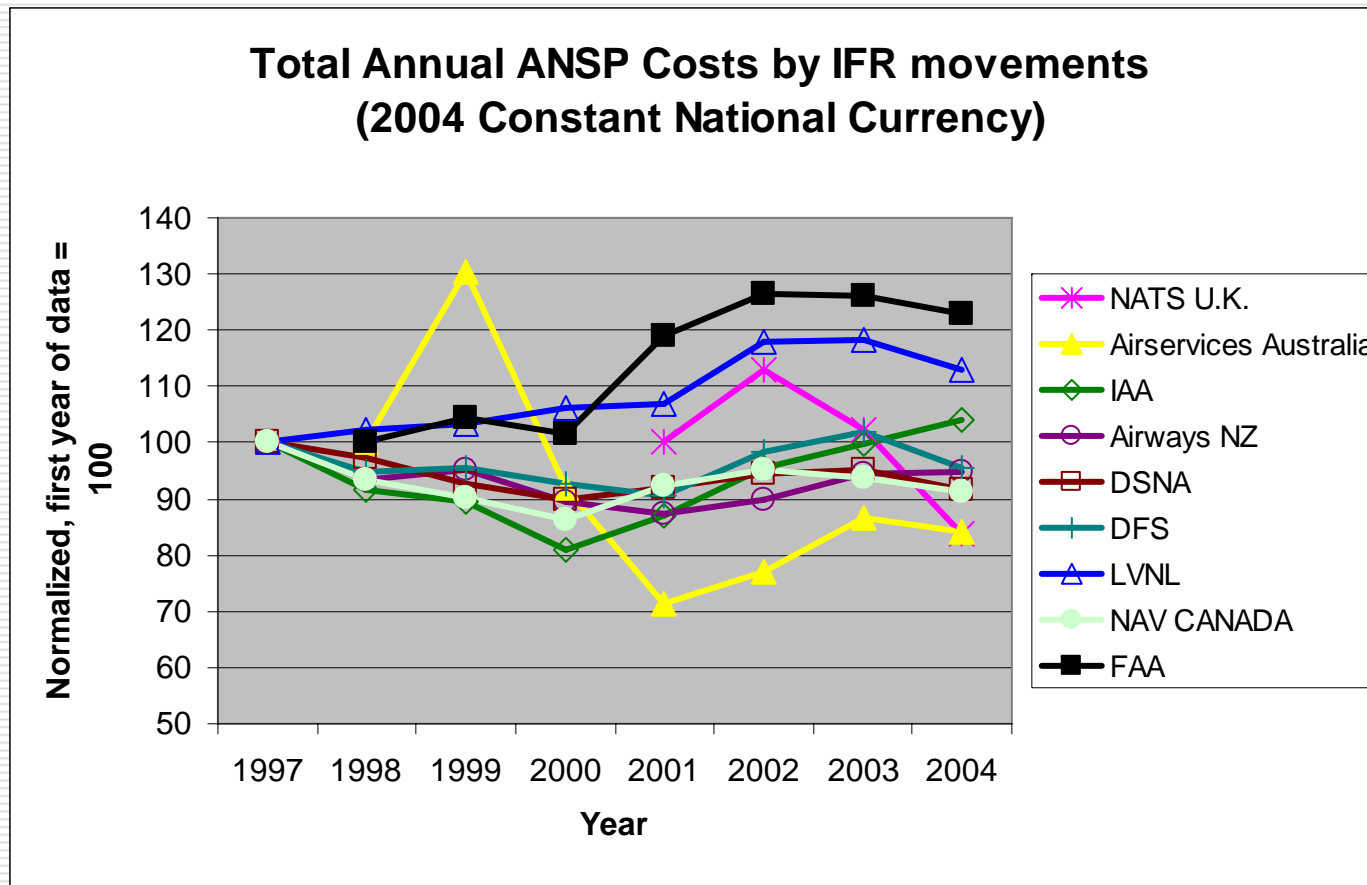
Trends in Safety Incidents



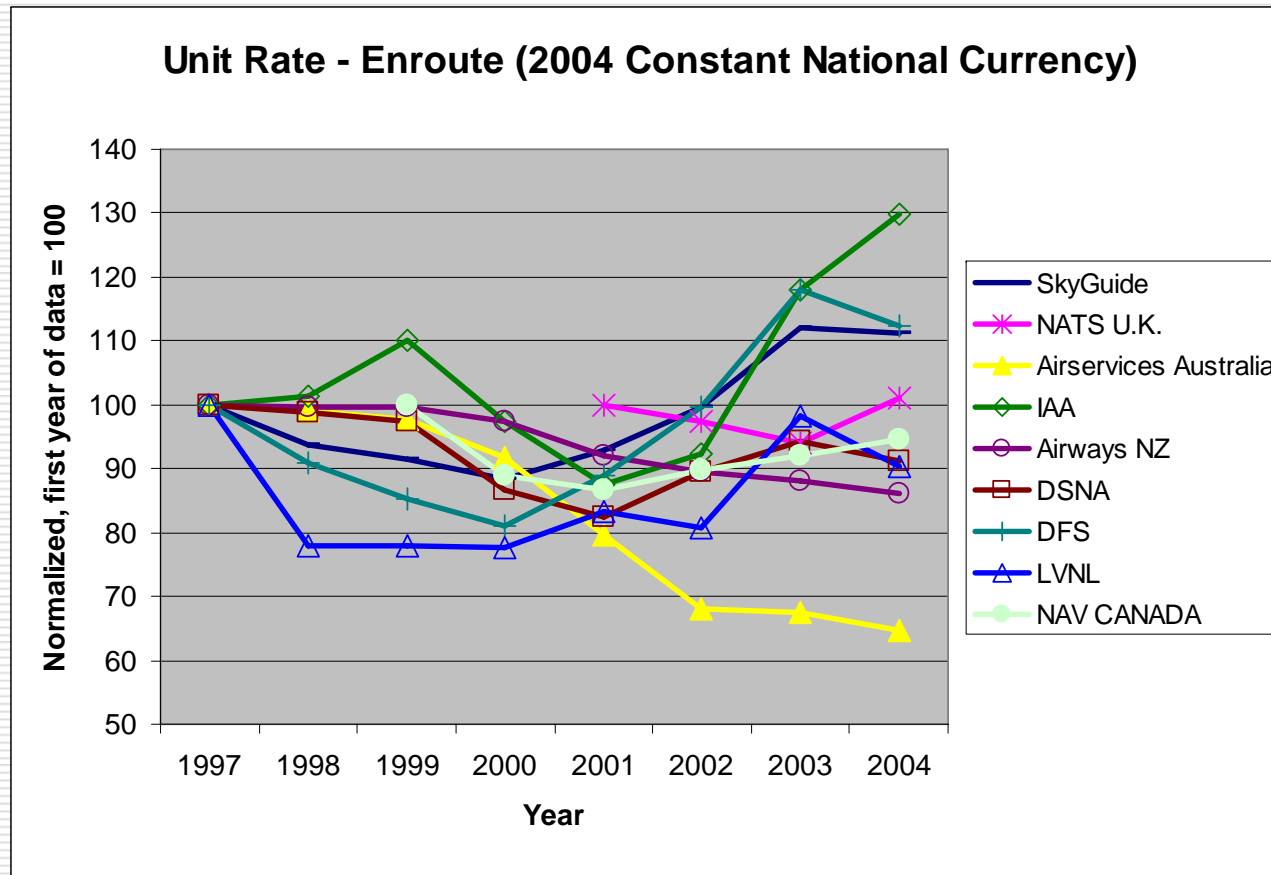
Findings: Efficiency

- ❑ 30% spread in trends in cost per IFR movement between several commercial ANSPs and FAA
- ❑ Major benefit of commercialization
- ❑ Model makes difference – customers most satisfied with cost control in Australia, Canada and New Zealand
- ❑ Strongest results when model provides clear separation from government socio-economic and political priorities
- ❑ Government priorities on job protection, development of small communities, stimulating industry, local benefits etc in conflict with cost efficiency

COST PER IFR MOVEMENT

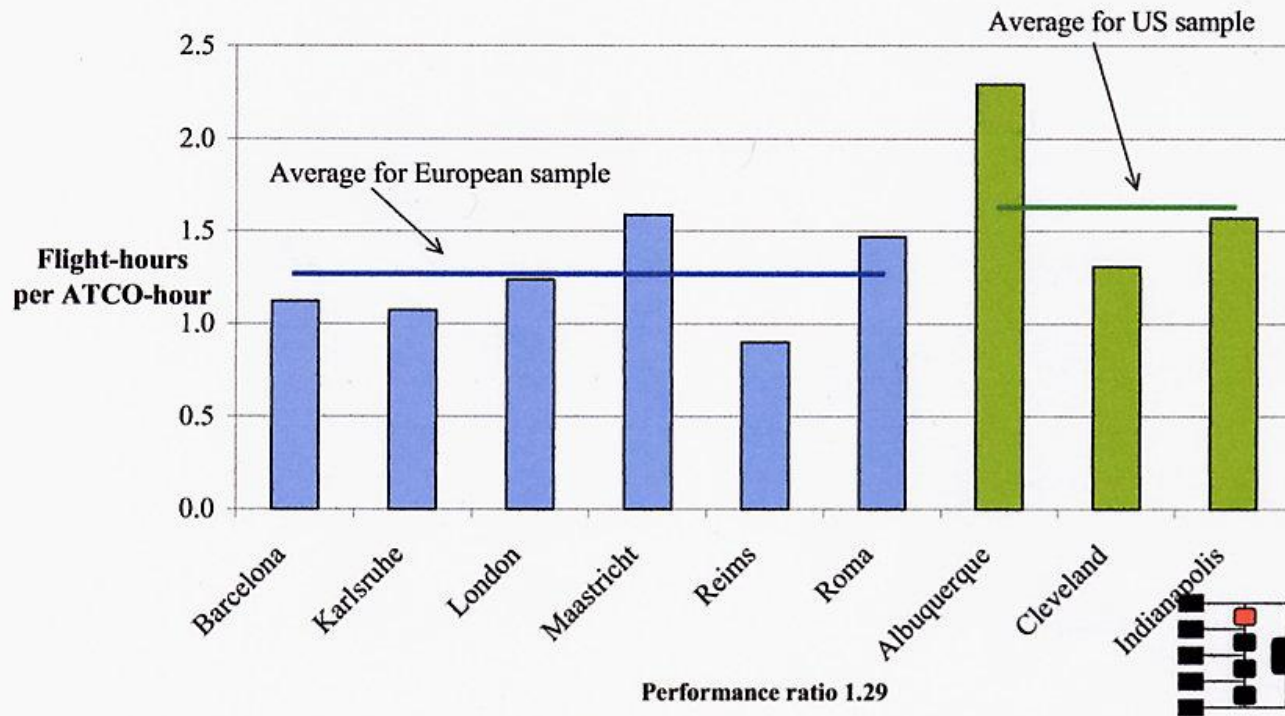


User Fees (En-route)



EUROCONTROL – FAA Study

Figure 4.2: Comparison of flight-hours per ATCO-hour



Findings: Service Provision

- ❑ Reduction in delays through correcting short-staffing, innovative technology
- ❑ Major difference in customer responsiveness resulting in improvements to flight efficiency:
 - e.g. oceanic satellite technology years ago in commercial ANSPs but just happening at FAA
 - ADS-B in Australia, rapid RNP procedures
- ❑ Customers strongly supportive of benefits of commercialization on service quality
- ❑ “Frustration” over slow progress at FAA

Findings: Stakeholder opinion

- Almost unanimous support for commercialization from regulators, customers, military ATC and unions of commercialized ANSPs
- “Undoubtedly one of the greatest benefits of ANS commercialization is that there never has been any confusion over just who precisely the customer is.” – Air New Zealand

Linking Structure to Performance: Business Discipline

- ❑ E.g. all commercial ANSPs in sample modernized
- ❑ “Like Night & Day” before & after commercialization
- ❑ Consistent view of stakeholders that technology implementation advanced over government
- ❑ Requirement to develop business cases (with customers where appropriate)
- ❑ Much tighter business discipline – less time in development, less customization, rapid deployment
- ❑ More inter-operability, common procurement
- ❑ Ability to reward or punish managers
- ❑ FAA had mixed results, cost overruns and delays

Linking Structure to Performance: Customer-oriented Approach

- ❑ Introduction of user fees has improved allocative efficiency by information exchange on which services are important and how much services cost
- ❑ Where customers actively involved, and ANSP is transparent, investments scrutinized for value, costs minimized, and services maximized
- ❑ Customers are few in number and financially articulate – results in efficiency gains and reduction of ‘gold plating’
- ❑ Governance structure can support customer orientation – e.g. presence on board, barriers to prevent government/political priorities from displacing customer priorities

Linking Structure to Performance: Government Ownership & Control

- ❑ Who owns the commercial ANSP not a critical factor
- ❑ Most important to permit business culture to thrive
- ❑ Some ANSPs have mechanisms that insulate them from government (NZ), reduce government ownership (Canada, UK), or have strong boards coupled with government restraint (Australia)
- ❑ FAA has extensive government micro-management, political direction, and government-wide budget constraints resulting in conflicting priorities, excess costs, difficulties completing modernization programs, and sub-optimal customer service

Linking Structure to Performance: Regulatory Framework

- ❑ Government must fulfill its regulatory responsibilities for safety and consumer protection
- ❑ Example of poor safety oversight leading to consequent major increase in safety infractions
- ❑ Regulators advise government should strengthen ANS safety regulatory capacity before commercialization
- ❑ Variety of economic regulatory models in sample – tailored to needs of aviation community and degree of stakeholder influence

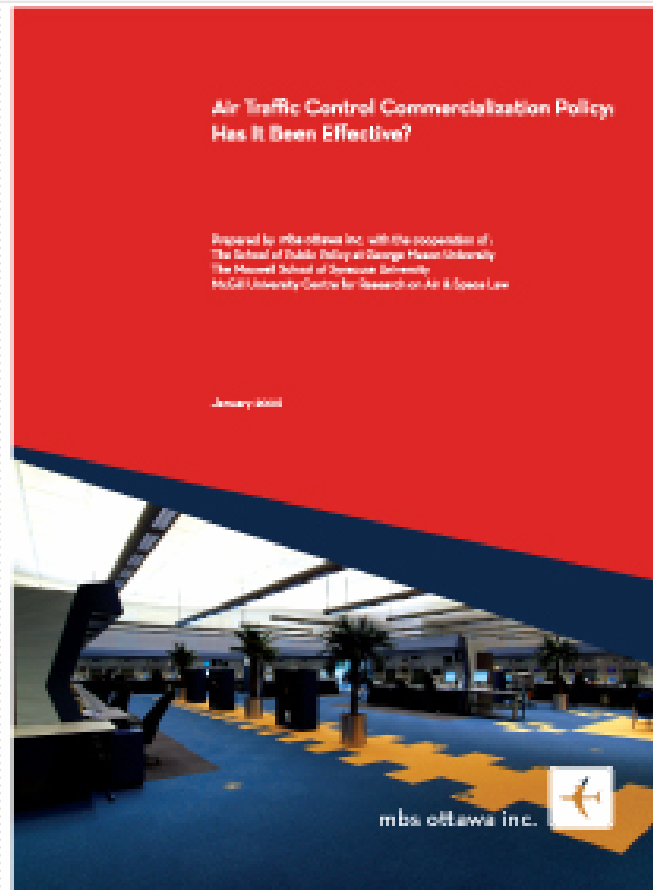
Benchmarking

- CANSO very active in benchmarking
 - However, still definitional and measurement problems e.g. safety incidents & severity
- Trend analysis also useful
- IATA working with CANSO on identifying key performance indicators and targets
- EUROCONTROL Performance Review Unit provides in-depth analysis of over 30 European ANSPs
- Comparative benchmarking results improve transparency, influence performance

Conclusion

- ATC Commercialization has allowed ANSPs to contribute more effectively to aviation value chain:
 - Some models increase performance more than others
- Commercial ANSPs exhibit three main strengths:
 - Sensitivity to customer needs
 - Agility in reaching a decision
 - Ability to carry it through
- Commercialization drives performance where several factors come together:
 - Independent governance structure
 - Effective customer influence
 - Robust government oversight

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