



Innovations could be an expensive toy if not properly applied





Why? It may not be solving the problem





A Sound Business Case Is always Based on Problem Solving



Reduce Cost



Improve Quality



In the Context of Airport Operations

- Cost
 - Improved operational efficiency
 - Reduced manpower requirements
 - Automation (decision making, manual process)
 - Mechanization (heavy duty work)
- Quality
 - Safety
 - Reliability
 - Resilience
 - Predictability



Problem Definition of Paramount Importance

- What is present situation?
- What is the problem?
- How may we solve it?
 - Explore alternative solutions
- What is the best solution?



Problem Analysis

- Qualitative and quantitative analyses
- Traffic forecast
 - Volume
 - Type (fleet mix)
- Operational and CAPEX analyses



Examples of Ground Ops Problems

- Faster turnaround needed
 - for better economic efficiency of stands
- Manpower costs
- Safety



Most Promising Technologies

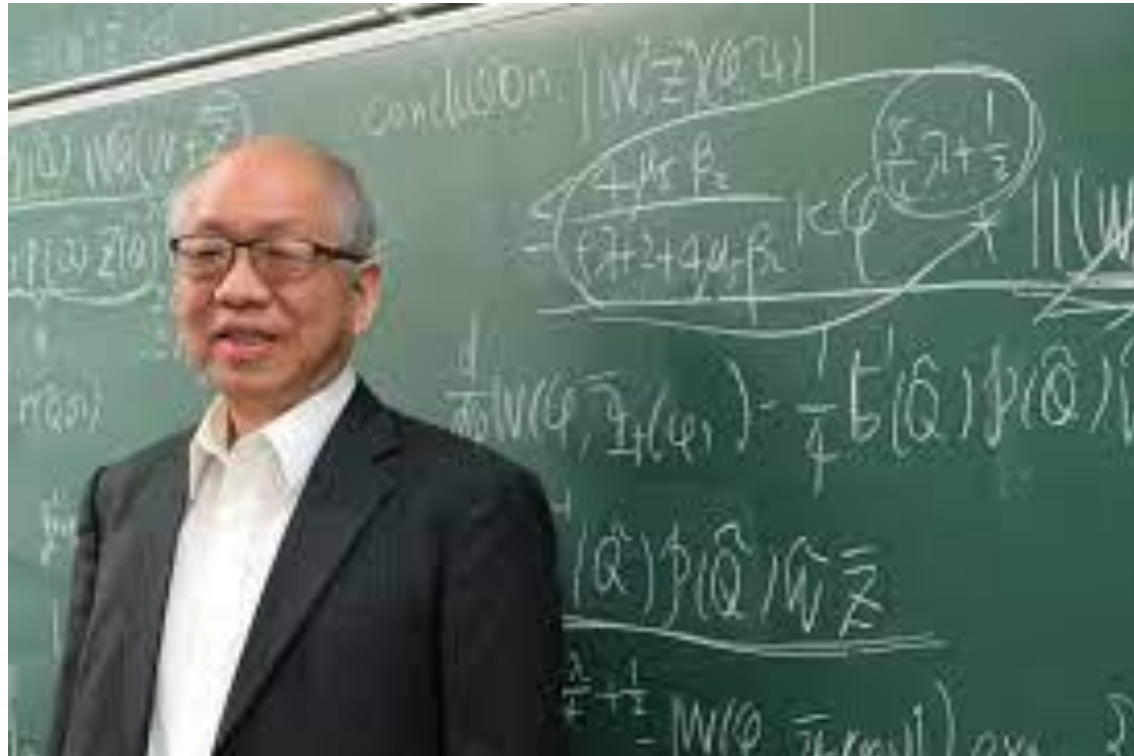
- Cloud based computing and AI
 - Optimized resource allocation (aircraft stand, baggage belt)
- 5G communication
 - High speed real time data transmission
 - For optimization and automation
- Machine vision
 - Image analytics
 - Data collection

**“There is no machine that has
common sense”,**



Alicia Troncoso
President of the Spanish Association of Artificial Intelligence

AI No Match for Innovative Human Minds



Yau Shing Tung, Fields Medal Winner 1982



Common Pitfalls in Applying Technologies

- No sound business case nor clear and agreed problem statement
 - Not fit for purpose
 - Under-designed or overdesigned
 - Sometimes a simple solution could have solved the problem
- Poor project management
 - Cost and time overruns



Common Pitfalls (cont')

- No feedback or review after implementation
 - Did not defined **KPI**
 - Operating costs
 - reliability
 - System falls into disuse
- Didn't Optimize system before implementing technology
 - Automating an inefficient system = Doing something inefficient in an efficient manner



Key Success Factors

- Collaboration
 - Operator, regulator, technological suppliers, research institutes
- Stakeholder engagement
 - Agreed problem statement and KPI
- Encouragement and sharing
 - ACI APAC & MID Award for Innovations in Airport Safety
 - ACI World Technology Innovation Awards



Sharing Fosters Innovation



* ACI APAC & MID Award for Innovations in Airport Safety will be launched in 2024



Key Success Factors (Cont)

- Cultural change
 - Characteristics of innovative teams*
 - Adequate delegation of power and decision making
 - Knowledge sharing
 - Opportunity to debate
 - Team work and trust between team members
 - Respect for individuals and differences in values
 - Dare to ask dumb questions

* How to be Innovative to Improve Safety? ACI Asia-Pacific, 2020



Concluding Thought

Innovative technologies may help solve problems but ingenuity is the exclusive domain of the human mind