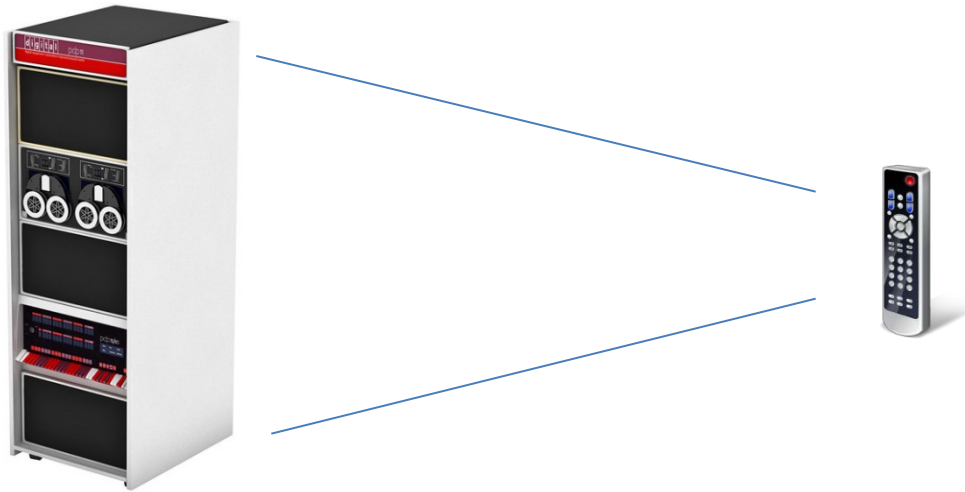


# Surviving the Future -with lessons learnt from the past

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# FACT

## Technology evolves at a fast rate



## Evolution of Challenges is faster!!!

# Lesson 1

- Users should define problems
- Let responders specify solution
  - Very often Tenders over specify the requirements
  - Leaves little scope for responders to suggest alternatives

# Lesson 2

- Tendency to go with big boys
  - How much does your business mean to the responder
  - How much of their current work is relevant to your needs

# Lesson 3

- Collaborative effort
  - Too often the tendency to go it alone and expect other to follow
  - In grouping, the dominant voice sets the pace

# Lesson 4

- Utility based pricing
  - Different from lease or right to use
    - E.g. Cloud Services
- Investment by provider – Operational expense for user

# Lesson 5

- Strategic Benchmarking
  - Cross Industry
  - Intra Industry
  - Learn from a related field of work
  - Lowers development cost and time

# Strategic Benchmarking – cross industry

- ICAO Regulatory framework to secure Air Cargo Supply Chain
  - regulated agent and known consignor regimes
  
- WCO SAFE framework of standards to secure and facilitate Global trade



# Strategic Benchmarking – cross industry

Information flow between different stakeholders in the supply chain through following documents

- Invoice
- Packing List
- Certificate of Origin
- Dangerous Goods Declaration
- Air waybill
- House Cargo Manifest
- Export Goods Declaration
- Customs release export
- Air Cargo Security Declaration
- Air Cargo flight Manifest
- Export Cargo Declaration
- Import Cargo Declaration
- Import Goods Declaration
- Customs Release Import

**AUCTORIZO** (medieval Latin)

- to confirm, approve, authenticate.

# Strategic Benchmarking – cross industry

- Total of 14 documents
  - Not printed on secure paper. So, open to forgery.
  - The documents signatory could be any employee in the value chain. His authority to sign and by extension, the identity of the originator of the content is unknown.
  - Could be modified in transit – no tamper evidence

# Strategic Benchmarking – cross industry

- Learn from E-MRTD program
  - Working towards using 2D barcodes with digitally signed content
  - Protection of document without a chip – evidence of origin and authenticity
  - Tamper evidence
  - Existing infrastructure in place – incremental cost for a huge benefit

# Strategic Benchmarking – intra industry

Visa is one aspect of facilitation

## •Challenges

- Locate embassy – may not be in your country of residence
- Locate correct form to apply – online information is often confusing
- Data requirements may vary
- Visa types – not consistent across countries
- Passport needs to be sent to Embassy for duration of processing
- Visa dependencies
- Fee payment takes different forms

## •Current E-Visa regimes

- Apply online on per country basis
- After approval, you get a “reference number”
- Airline checkin counters and immigration need online lookup to verify your visa
- Alternately, visa is printed on plain piece of paper – easy to forge as no security features

# Strategic Benchmarking – intra industry

## Possible Solution

### Learn from Aircraft Registry and MRTD

- Single portal
  - Easy to apply for multiple countries simultaneously
  - Visa dependencies can be programmed into system
  - Backend integration with country systems
  - Common standards on data capture
- Use digitally signed 2D bar code to print visa information
  - Secure
  - Tamper Evident
  - Interoperable
  - Offline



# Strategic Benchmarking – cross industry

- Aircraft Navigation Systems and communications are currently not protected – Need for Encryption/Authentication and multi party channel/credential management.
- TV Set-Top boxes use Encryption and multi party channel/credential management – starting point for Aircraft Navigation systems

# Summary

- A collaborative effort among stakeholders which include Users, Industry and regulatory body along with centralised systems that are run on a utility pricing will be the best way to overcome challenges of the future.
- Do not re-invent the wheel – Somebody somewhere has done it. Use it to build your solution



THANK YOU

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