

Innovation

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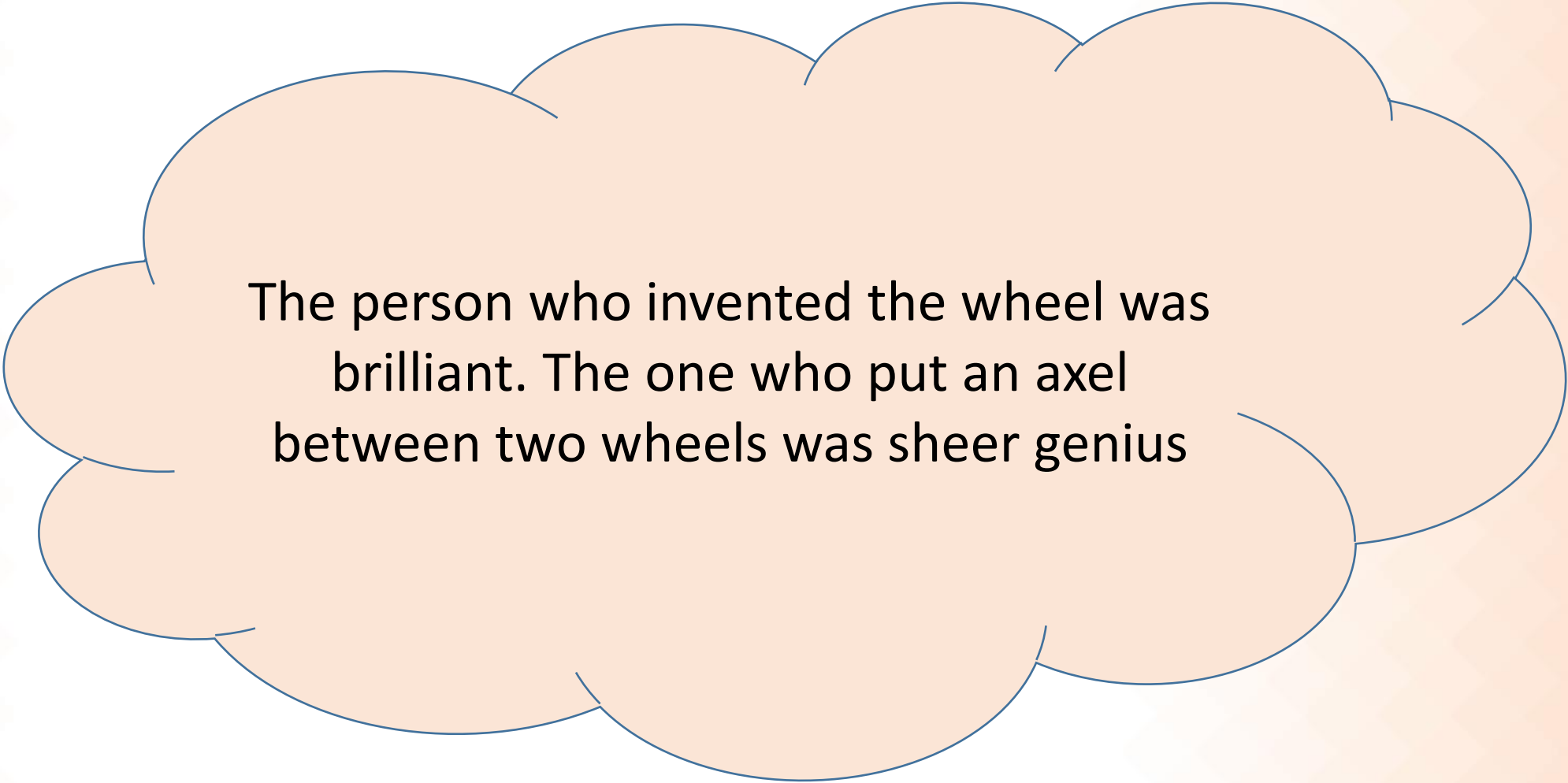
Innovations in Travel Documents.. A few examples

- Adding a chip – increased assurance in the integrity of the document
- ICAO PKD – A trust broker for global interoperability of travel documents
- Automated Gates – better facilitation with increased security
- Digital Travel Credentials – The next step in the evolution of travel documents and Facilitation
- IDB – A new paradigm in protecting documents that don't have a chip

What did I learn from my
experience in being involved in all
of this work in ISO and ICAO?

Presenting my 8 maxims for Innovation

1. Innovation is incremental



The person who invented the wheel was brilliant. The one who put an axel between two wheels was sheer genius

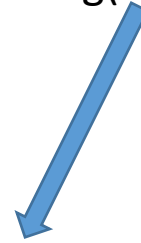
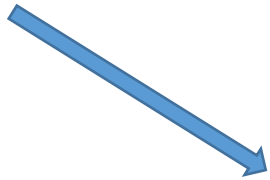
2. Innovation needs a use case

Elliptic Curves (1999)

Merkle Tree (1980)

Hashing(1953)

Proof of Work (1997)



SOLVE DOUBLE SPEND PROBLEM IN PEER-TO-PEER TRANSACTIONS OF ELECTRONIC CASH



BLOCKCHAIN (2009)

3. Benchmarking (*aka Copy Shamelessly*)

F1 pit stops  Optimise Airport gate management

ICAO VDS-NC + EU-DCC  ICAO IDB

4. Innovation is an enabler – never a product

- The ICAO DTC is a concept and a specification
- The Finland DTC pilot was successful because:
 - All stakeholders were involved in defining functional requirements
 - System designed with DTC as enabler to deliver the functional requirements

5. No emotional attachment to an idea

- Out of a 100 ideas, only one succeeds
- If you are attached to everyone of your ideas, you cannot weed out the bad ones from the one good idea

6. Enjoy success, celebrate failure

- Innovation happens if you try
- Success is never guaranteed – failure is part of it

I have not failed.. I've just found 10,000 ways that don't work
- Thomas A. Edison

7. Innovation cannot be taught, it can only be facilitated

- Every human being has the potential for innovation – Does not need to be taught
- Innovation happens because the environment is right. People are allowed to try things, fail and re-try
- Be open to all ideas, even if they seem trivial
 - DTC came from the idea of a “Cloud passport”

8. The Art of the Approximate

- You will never have all the answers – Thrive in that uncertainty

Rosetta space probe

- Launched March 2, 2004 to land on comet 67P/Churyumov–Gerasimenko which travels at a maximum velocity of 38 km/second
- Comets orbit predicted to an accuracy of approximately 100 KM
- Travelled 4 billion miles through space
- Adjustments to the trajectory as the accuracy of prediction improved
- Lander touched down on 12 November 2014

Summary

- Innovation is incremental
- Innovation needs a use case
- Benchmarking drives innovation
- Innovation is an enabler – not a product
- No emotional attachment to ideas
- Enjoy success, celebrate failure
- Innovation cannot be taught, it can only be facilitated
- Embrace the art of the approximate

Thank You
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