A Human Factors Program in a Multicultural Airline

Lex Rock Heemstra – SM Human Factors

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Contents

- A multi cultural Airline
- Understanding Human Factors
- Identifying your target audience
- Understanding culture – in all forms
- Supporting Evidence Based Training
- Delivering the product

WARNING
Adult Supervision Required!

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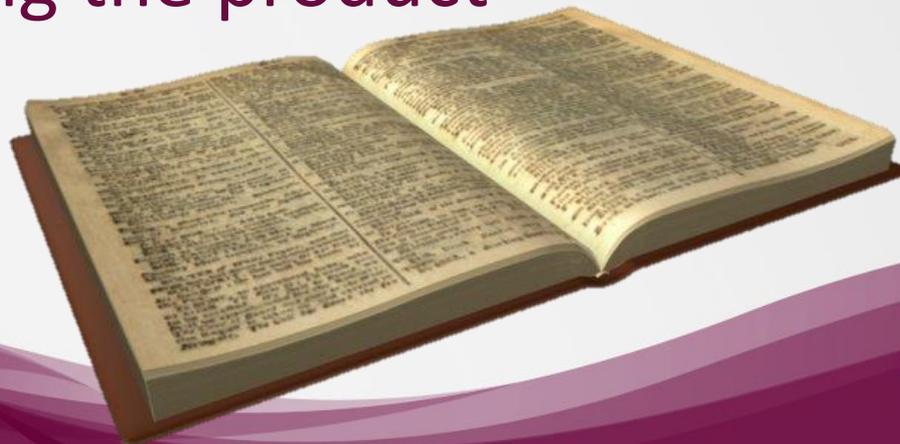
Pilots & Cabin Crew in QR
129 Nationalities – Over 3400 Pilots and 10500 Cabin Crew

Airbus Fleet:
- A320
- A330
- A340
- A350
- A380

Boeing Fleet:
- 747
- 777
- 787

Over 150 Destinations

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What is Human Factors?

What is really happening

What I think is really happening

Senses

Reality

Perception of Reality

SITUATIONAL AWARENESS

INFORMATION PROCESSING

UNDERSTANDING

STARTLE EFFE...

WORKLOAD

ASSERTIVENES...

UNKNOWN

We make decisions based on our PERCEPTION of reality

LEADERSHIP   JUDGEMENT   KNOWLEDGE   PROCEDURES

TEAMWORK   DECISION MAKING   STRESS

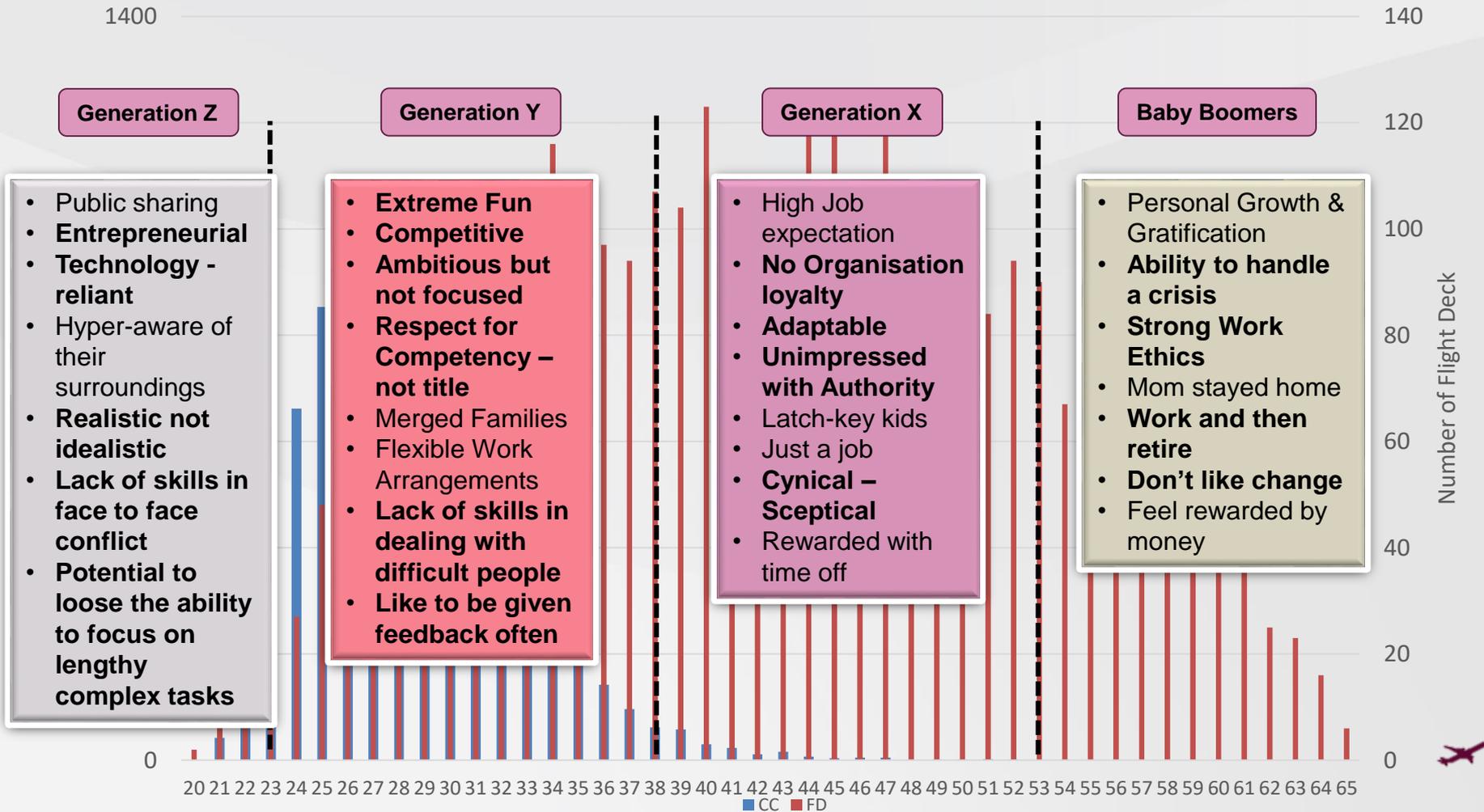معاً إلى كل مكان
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Understanding your Target Audience

- Generational Culture

- National Culture

- Professional Culture

- Organisational Culture

- Safety Culture

Generational Differences

Generation Z

- Public sharing
- **Entrepreneurial**
- **Technology - reliant**
- Hyper-aware of their surroundings
- **Realistic not idealistic**
- **Lack of skills in face to face conflict**
- **Potential to loose the ability to focus on lengthy complex tasks**

Generation Y

- **Extreme Fun**
- **Competitive**
- **Ambitious but not focused**
- **Respect for Competency – not title**
- Merged Families
- Flexible Work Arrangements
- **Lack of skills in dealing with difficult people**
- **Like to be given feedback often**

Generation X

- High Job expectation
- **No Organisation loyalty**
- **Adaptable**
- **Unimpressed with Authority**
- Latch-key kids
- Just a job
- **Cynical – Sceptical**
- Rewarded with time off

Baby Boomers

- Personal Growth & Gratification
- **Ability to handle a crisis**
- **Strong Work Ethics**
- Mom stayed home
- **Work and then retire**
- **Don't like change**
- Feel rewarded by money

Number of Flight Deck

x-axis: 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65

Legend: ■ CC ■ FD

Left axis: 1400 ... 0
Right axis: 140 120 100 80 60 40 20 0

Data: Flight Planning – Nationalities – December 2016
West Midland Family Centre, 2017
Anne K. Robey-Graham, 2008

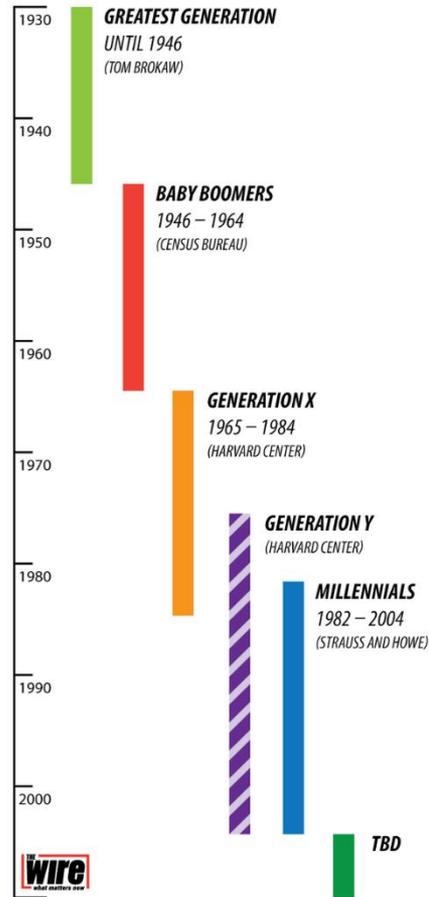# How do they like to Learn?

Age in 2017

GENERATION, BY BIRTH YEAR

1930	**GREATEST GENERATION** UNTIL 1946 (TOM BROKAW)
1940	
1950	**BABY BOOMERS** 1946 – 1964 (CENSUS BUREAU)
1960	
1970	**GENERATION X** 1965 – 1984 (HARVARD CENTER)
1980	**GENERATION Y** (HARVARD CENTER) — **MILLENNIALS** 1982 – 2004 (STRAUSS AND HOWE)
1990	
2000	**TBD**

the WIRE *what matters now*

	Influencers	Training Focus	Learning Format	Learning Environment	Ideal Leaders
53-72	Evidential Experts	**Technical Data Evidence**	**Relaxed Structured**	**Classroom Style Quiet Atmosphere**	Commanding Thinkers
33-52	Pragmatic Practitioners	**Practical Case Studies Applications**	**Spontaneous Interactive**	**Round-Table Style Relaxed Ambience**	Co-ordinating Doers
23-37	Experiential Peers	**Emotional Stories Participative**	**Multi Sensory Visual**	**Café Style Music & Multi Modal**	Empowering Collaborators
7-22	User Generated Forums	**Multi Modal eLearning Interactive**	**Student-Centric Multi Stimulus**	**Lounge room style Multi Stimulus**	Inspiring Co-Creators

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Barriers to Cockpit/Cabin Communication

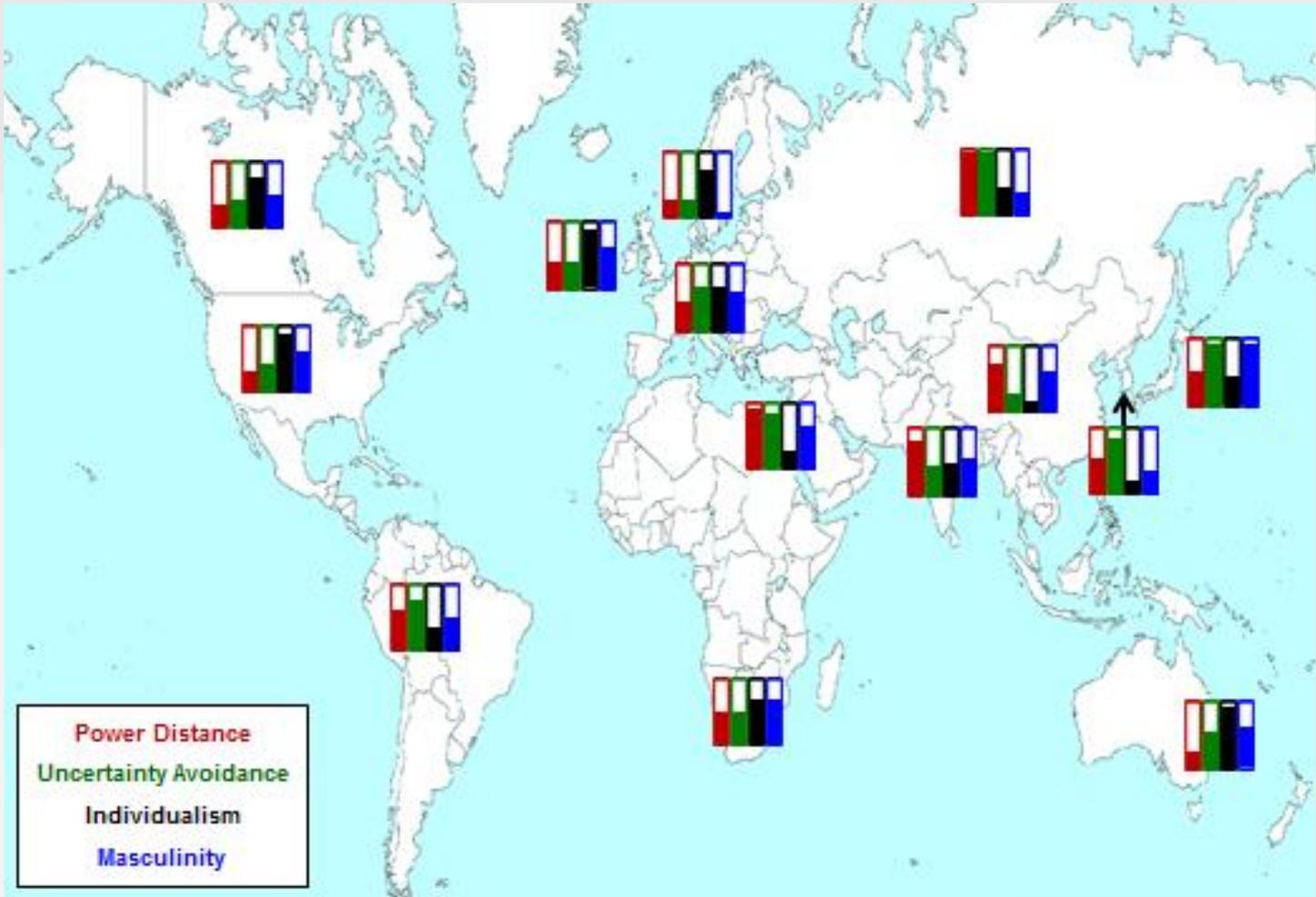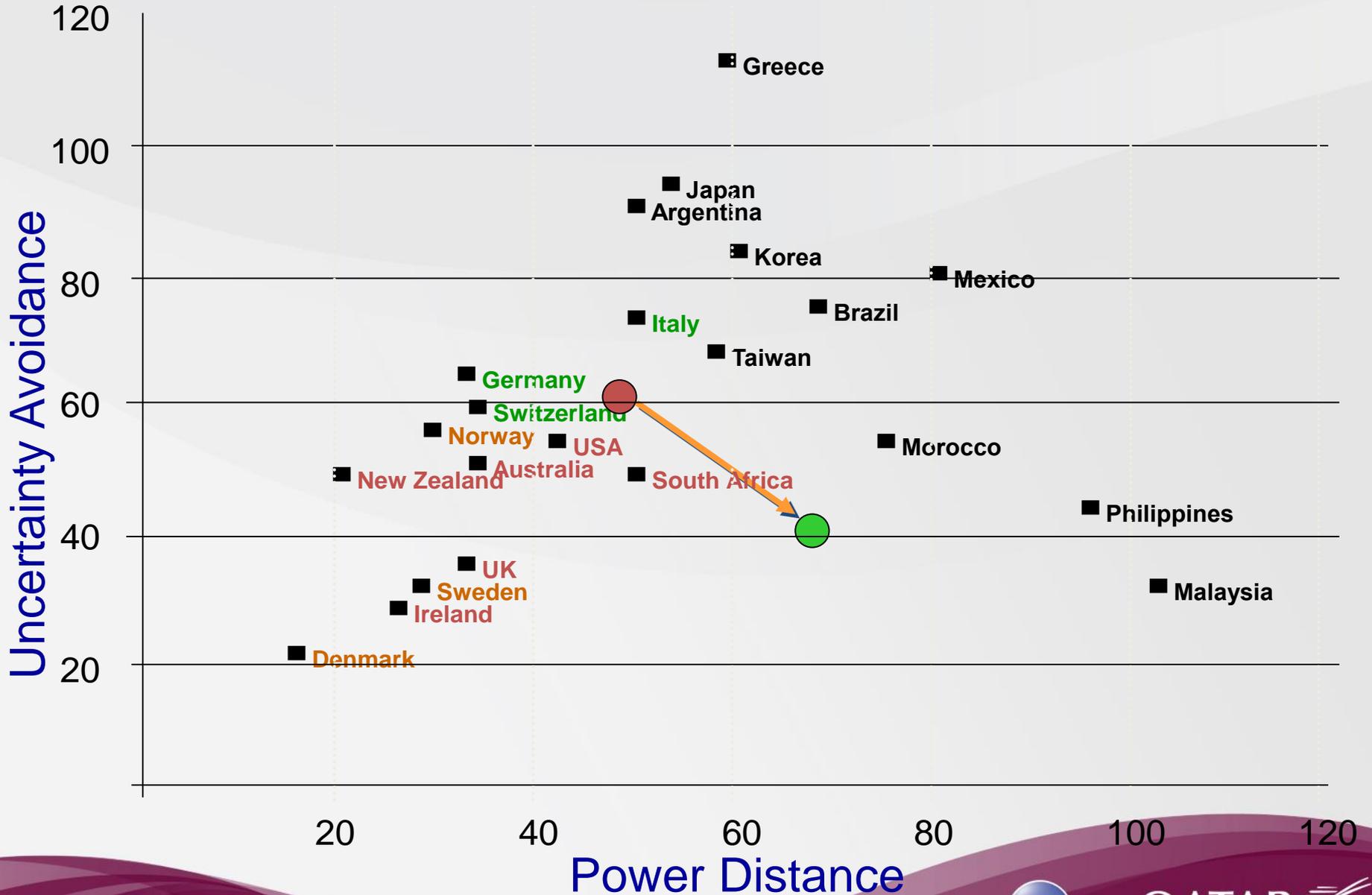| Dimension	Cockpit	Cabin
Gender	Mostly male	Mostly female
Age (average)	28 - 60	23-32
Workspace	Confined	Spacious
Physical Activity	Stationery	Active
Noise Level	Relatively quiet	Relatively noisy
Airport Workload	High	Low
Cruise Workload	Low	High
Primary Goal	Safety	Safety
Primary Role	Technical Expertise	Service Delivery
Cognitive Orientation	Technical	Social
Career	Life Long	1-7 years

Hofstedes Cultural Traits

- Power Distance
- Uncertainty Avoidance
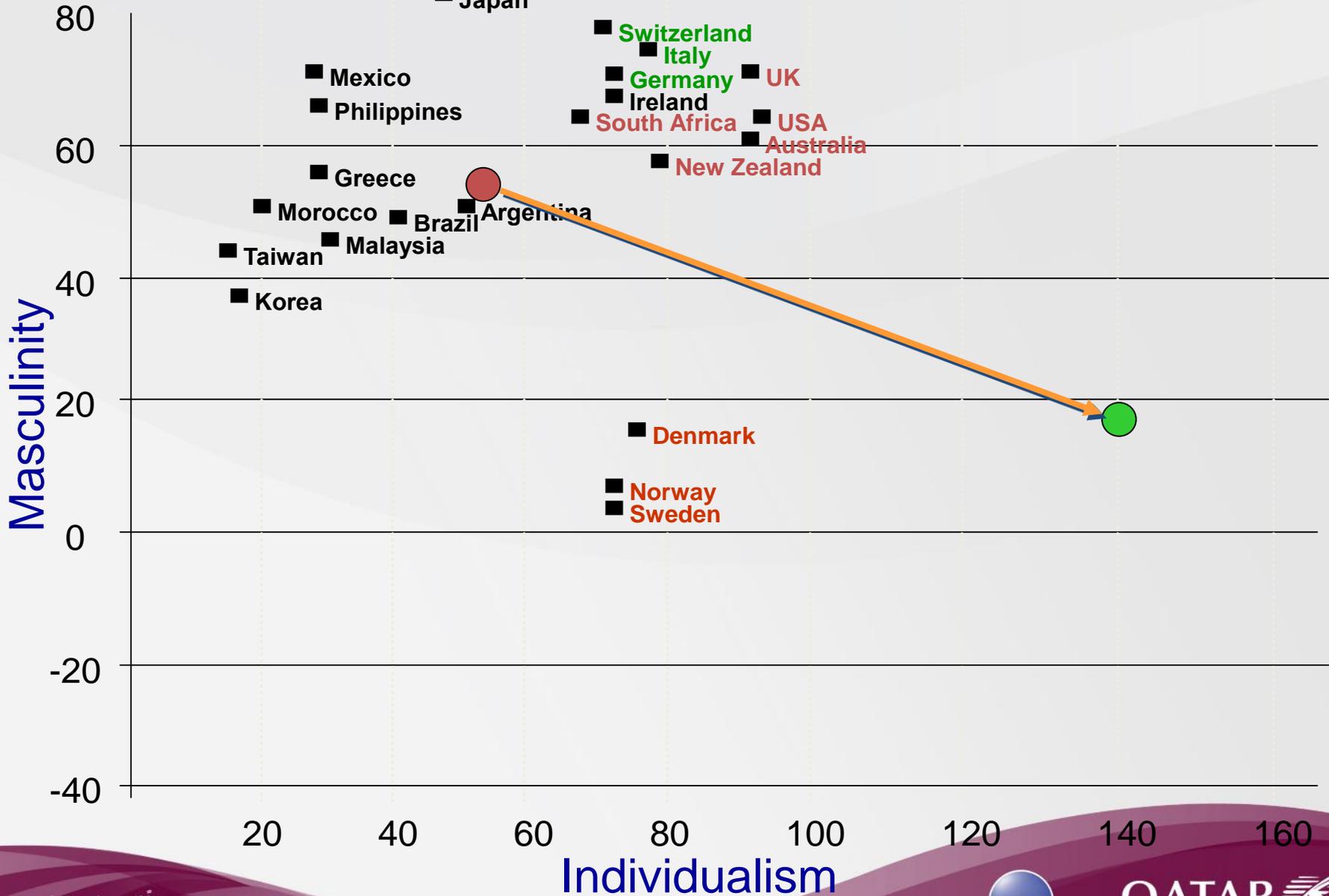- Individualism vs Collectivism
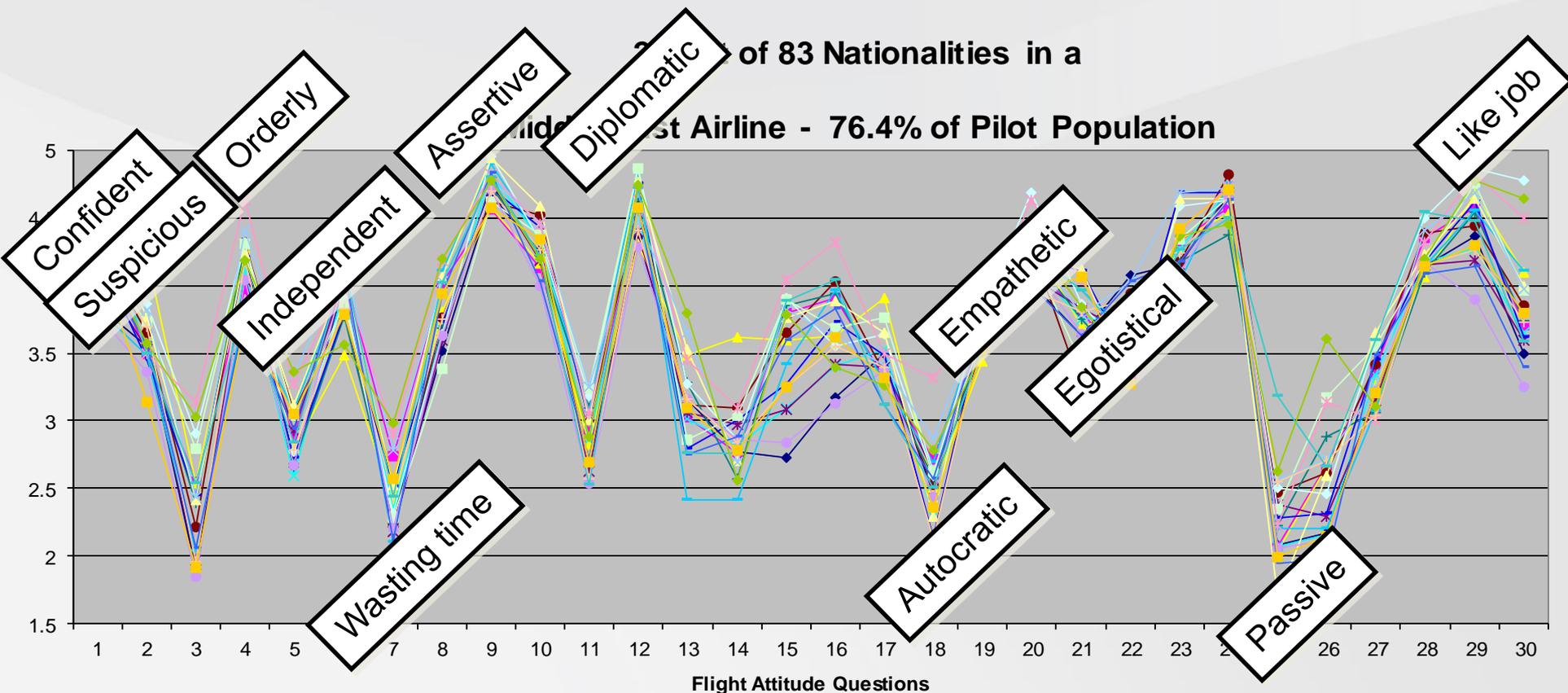- Masculinity vs Femininity

National Culture

National vs. Pilot Culture

National vs. Pilot Culture

Masculinity vs. Individualism scatter plot

- Japan
- Switzerland
- Italy
- Mexico
- UK
- Germany
- Philippines
- Ireland
- South Africa
- USA
- Australia
- New Zealand
- Greece
- Morocco
- Brazil
- Argentina
- Taiwan
- Malaysia
- Korea
- Denmark
- Norway
- Sweden

Axis labels: Masculinity (y-axis, 80 to -40), Individualism (x-axis, 20 to 160)

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Airline Professional Culture

Sample of 83 Nationalities in a Middle East Airline - 76.4% of Pilot Population

Labels on chart: Confident, Suspicious, Orderly, Independent, Assertive, Diplomatic, Wasting time, Empathetic, Egotistical, Autocratic, Passive, Like job

X-axis: Flight Attitude Questions (1–30)
Y-axis: 1.5 to 5

Legend: Australia, Belgium, Brazil, Britain, Canada, France, Germany, Holland, Ireland, India, Italy, Jamaica, Malaysia, Mexico, New Zealand, South Africa, Sweden, Switzerland, UAE, USA

Source: Flight Management Attitude Questionnaire for Airline 2010 (N= 2095)

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Prioritising Culture

Generational Culture

National Culture

Organisational Culture

Professional Culture

Safety Culture
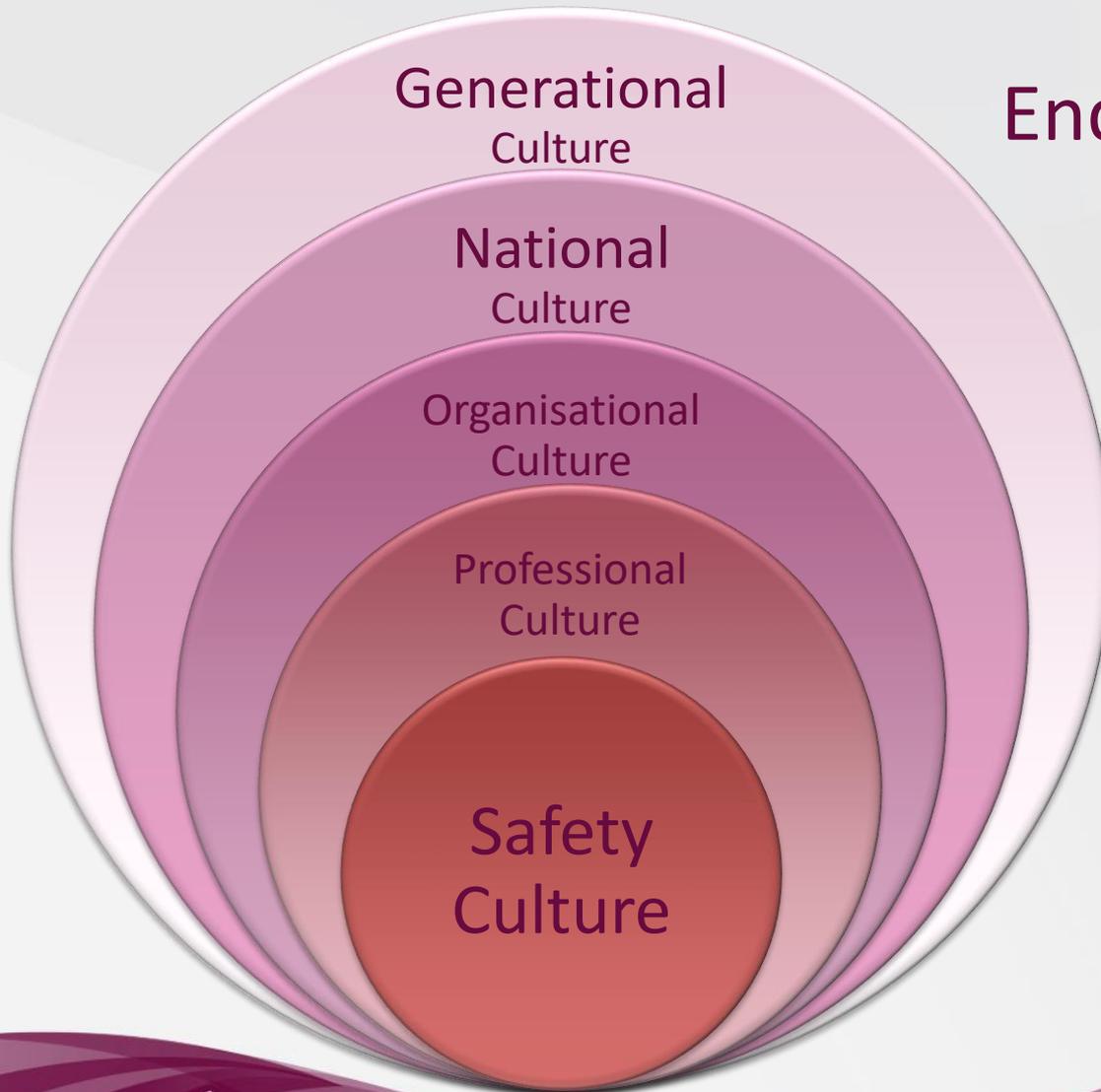
End Goal = Safety

Prevention of damage, injury or death

To protect yourself and others

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EBT Assessment Competencies

- Knowledge
- Procedures
- Handling
- Automation

- Workload
- Situational Awareness
- Decision Making
- Communication
- Leadership & Teamwork

Reliability

Easily identifiable, can have clear links and short-term change may be possible

Resilience

Not easily identifiable, linked in complex ways and often require long-term change

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Working Together

- Strict adherence to SOPs and standard phraseology is the glue that holds a multicultural team together

- Creates predictability and coordination

- Allows for a shared mental model

- Sometimes you will need to adapt

In the end, safe and efficient operations are delivered by pilots and cabin crew who are guided primarily by their professional culture and have moved beyond "multi-culture" as an influential factor on the aircraft.

AMC/GM TO ANNEX III (PART – ORO)

- "Should ensure following aspects addressed":
  - Automation and philosophy on use of automation
  - Monitoring and Intervention
  - Resilience Development
  - Performance Adaptation
  - Surprise and Startle Effect
  - Cultural Differences
  - Operators Safety culture and company culture
  - Case Studies

CRM Program
Based on EASA ORO- FD and ORO - CC

Flight Deck

- Initial
- Conversion
- Recurrent
- Combined
- Pre Command
- Command
- TTT Flight Instructor
- TTT CRMI

Cabin Crew

- Initial
- Conversion
- Recurrent
- Combined
- CS
- CSD
- HPL
- TTT CRMI

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Summary

- Imperative to understand your target audience – adapt accordingly
- Culture flows through all modules
- Resilience in all courses
- Strong facilitation and class participation
- Evidence Based Training only

Conclusion

- You cannot change behaviour with a Power Point slide

Participate – Experience - Discover