Millennial Users in a 5G Context
- a WWRF Outlook

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Who are the Millennials?

– Millennials are born between 1982-2004 (Strauss and Howe, 1991)

– The largest generation ever

  – the first generation to come of age with cable TC, Internet and cell phones

  – undergoing a learning process in co-existence with technology and digital developments

In the coming years the Millennials go into positions in societies – show buying potential (done with their studies etc.)

Question is: Will this generation will have significant expectations and needs to 5G – technology/ business models
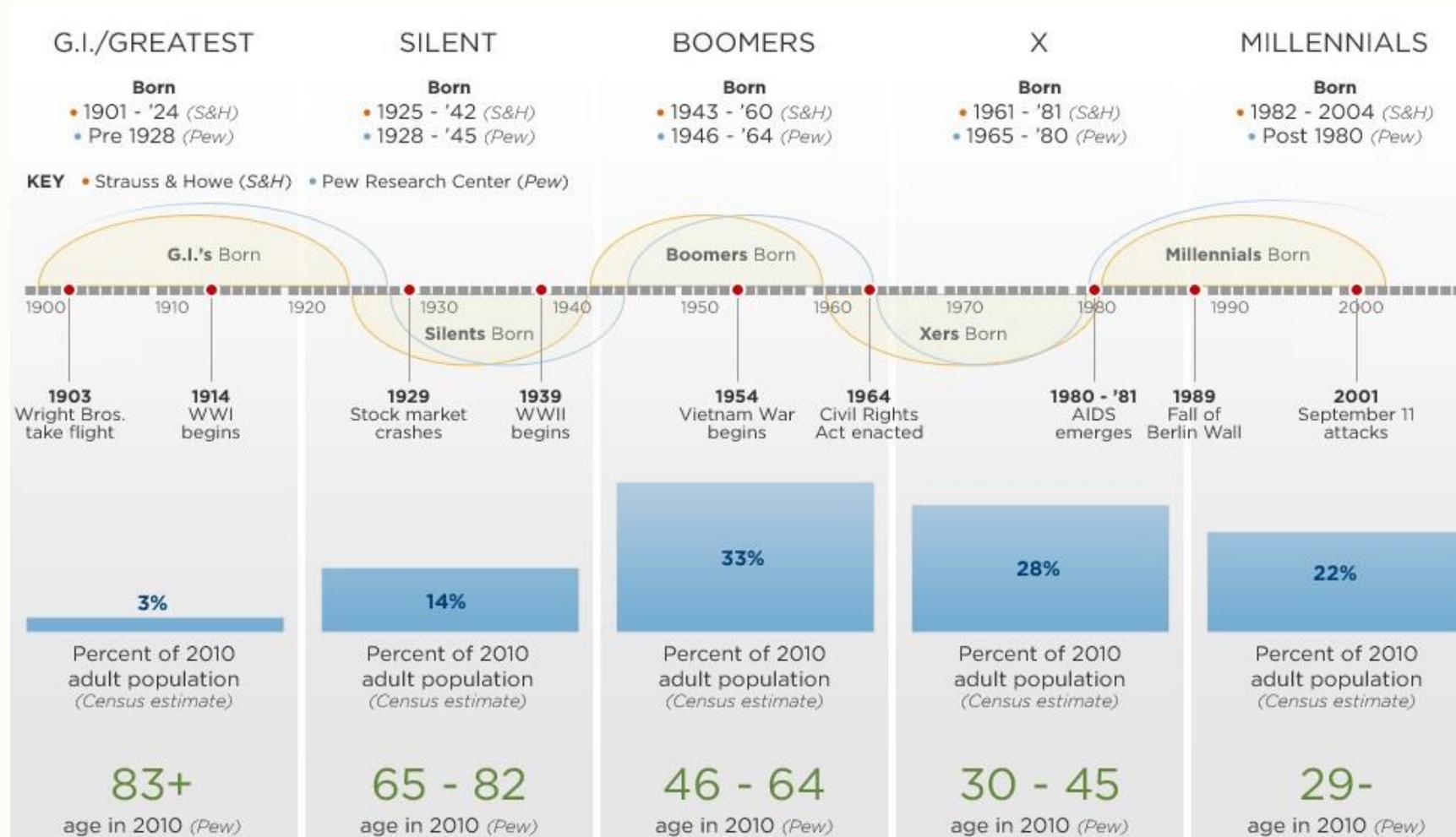
Purpose of this study

- Gain insights into the expectations and specific needs/requirements on 5G from Millennials

- Understand if Millennials have specific expectations in relation to 5G networks specifications, business models or services (application areas)

Background forming the Millennials

G.I./GREATEST	SILENT	BOOMERS	X	MILLENNIALS
Born	**Born**	**Born**	**Born**	**Born**
• 1901 - '24 (S&H)	• 1925 - '42 (S&H)	• 1943 - '60 (S&H)	• 1961 - '81 (S&H)	• 1982 - 2004 (S&H)
• Pre 1928 (Pew)	• 1928 - '45 (Pew)	• 1946 - '64 (Pew)	• 1965 - '80 (Pew)	• Post 1980 (Pew)

KEY • Strauss & Howe (S&H) • Pew Research Center (Pew)

G.I.'s Born

Boomers Born

Millennials Born

Silents Born

Xers Born

1900 1910 1920 1930 1940 1950 1960 1970 1980 1990 2000

1903 Wright Bros. take flight

1914 WWI begins

1929 Stock market crashes

1939 WWII begins

1954 Vietnam War begins

1964 Civil Rights Act enacted

1980 - '81 AIDS emerges

1989 Fall of Berlin Wall

2001 September 11 attacks

3%

14%

33%

28%

22%

Percent of 2010 adult population (Census estimate)

Percent of 2010 adult population (Census estimate)

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83+ age in 2010 (Pew)

65 - 82 age in 2010 (Pew)

46 - 64 age in 2010 (Pew)

30 - 45 age in 2010 (Pew)

29- age in 2010 (Pew)

Characteristics of Millennials

Millennials cannot be stereotyped – different interests and priorities and a natural interest in customization and individuality (self-expression), but..

– Generally, Millennials have a fascination of technology, like to do experimental activities and have a mind-set of an information age as defined by Frand (2000):

  – Computers aren't technology

  – The Internet is better than TV

  – Reality is no longer real

  – Doing is more important than knowing

  – Learning more closely resembles Nintendo than logic

  – Multitasking is a way of life

  – Typing is preferred to handwriting

  – Staying connected is essential

  – Zero tolerance for delays

  – Consumer and creator are blurring
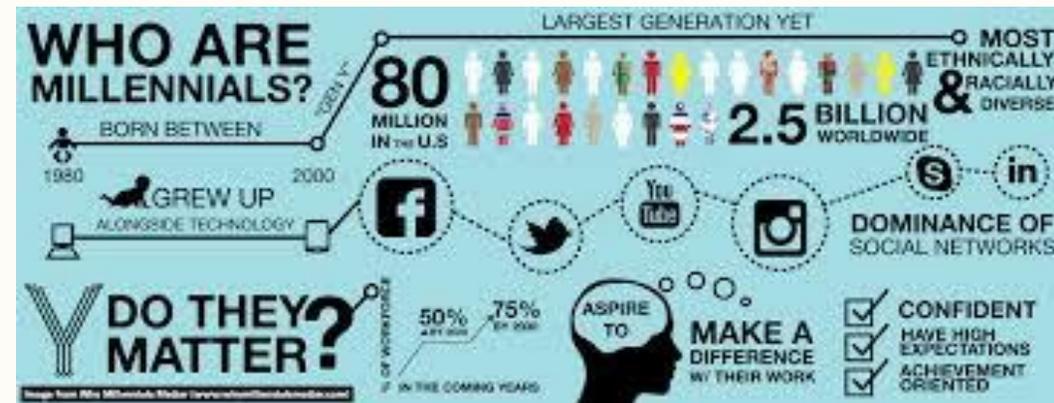
Characteristics, cont.

- Care about social issues – crowd-sourcing, take care about older people etc.

- Hit hard by economic conditions – low income, high unemployment rate, higher students loans than any other generation – 36% of USA Millennials rely on financial support from their parents, do volunteer work, 60% are more inclined to pay more for a product if it is environmental friendly

  - More inclined to stay in urban areas, take public transport, rent house

- Most educated generation, focus on health

- Do not have an interest in buying houses, cars   - rental and leasing is in focus

  - Have a urban focus – use public transport

Technology wise:
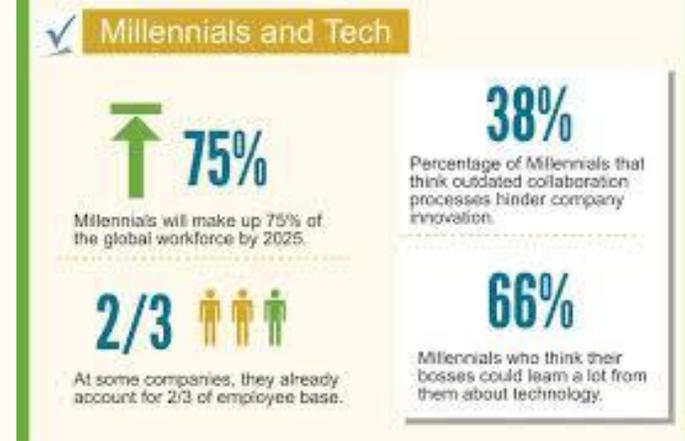
- Millennials prefer restaurants with Wi-Fi and app usage

  - Always connected!

- Technology is inherent in the Millennial generation – more than 74% think that new technology makes their life easier, and 54% think that technology help them being closer to friends and family

- Spend less time watching TV than other generations – do not own a TV

- They do not shop online more than other generations (only 6% shop online) they like to visit physical shops

How was the study conducted?

– Two focus groups – supplementing litt stud

  – 16 persons aged between 23 and 32 years old

  – Conducted at the university - volunteer participation

  – Students all with some IT knowledge/interest (selected IT studies)

- the students were asked about their knowledge about Edge, 3G and 4G

- they saw a video about this development Edge – 4G

- the were asked about their expectation to 5G

- they saw a video about a technology vision of use cases in 5G

- they discussed the general 5G use cases and their expectations

Results – 4G

- Generally high satisfaction with 4G – no interest in downgrading to 3G
- Use of mobile phones as access points in situations where Wi-Fi connectivity is insufficient
- High data rates, level of 4G coverage (even though that is not sufficient in Denmark)
- Music streaming possibility (as well as movies)
- Connectivity on the move
- They have no interest in down-grading and chose 4G as a natural update

Results –

- It will be a mobile evolution (not a revolution)

- It will provide higher data rates

- Will provide greater capacity for the IoT (think IoT already exists)

- Will enhance application delivery and virtual reality

- Will enhance more of personal broadcasting

- Facilitate the transmission of 4K and 8K videos

- Use cases are enormous – but let's see…..

  - Hardware will have to be developed

  - Uncertain how 5G will support a lot of sensors have a high poser consumption and an efficient battery life

  - What about the business models that will be deployed?

  - More interaction via virtual broadcasting

Results, cont.

- Generally the participants were pessimistic about the achievability of the visions presented in the 5G service provider video

- They cannot see how 5G can be useful to them (perhaps to specialised technical use cases but not them personally)

- They prefer lower battery consumption to data rates

- They would prefer to pay extra for security as a service

- They expect that service providers can present more diverse business models so users can choose when and what to pay for (and perhaps decide from situation to situation)

What can we learn?

– Millennials (that we talked to) have no high expectations to 5G – and generally do not believe in the high vision use cases

  – Based on their previous experiences when Internet upgrades have been, they cannot think 5G will be that interesting

– They are fairly satisfied with Internet as it is today. Being able to be online ALL the time (also when travelling or commuting), have cheap access, and pay only for what they use

– They are generally concerned about security and will pay extra for that as a service (if it is not too expensive)

– They think the service providers should provider more possibilities for broadband – dependent on time, situation and use case, the users should be able to have more or less bandwidth – so there should be variations in subscriptions

Around the world

- CHINA: Think laptops are equally important to smartphones. Use of social media is strong

- RUSSIA: Connection is important. 70% of Millennials use computers for emailing, searching information and sending/sharing pictures. Instant messaging and chatrooms are used on phones

- INDIA: Use computers and mobiles for work and study. One in two access social networking sites on a weekly basis

- SOUTH AFRICA 89% have a computer and 80% a smart phone, 50% have TV. Computers are used for emailing, surfing the Internet and banking

- UNITED ARAB EMIRATES: Staying connected is important. 75% use computers and 38% use mobile phones. 95% use Facebook once a week. 59% own a smartphone and it is the most important gadget

After the Millennials – the Centennials

– Born after 1995

– Facebook use is toned down in favour of visual communication as Snapchat and Instagram (OrderDynamics 2016 and Wall Street Journal 2017)

– They are better multitaskers, shift quickly between work and play; are more entrepreneurial and more globally oriented (Beall 2016)

– They have even more access to smartphones and use less time meeting friends physically, more virtually facilitated by, e.g. House party, Families, Tribe (Wall Street Journal 2017). One consequence of this is decreasing juvenile criminality documented in a Danish survey (Balvig 2017). There is simply less time to engage in criminal activities.

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