



Oulu Capital
of Northern
Scandinavia



Wearables -status in Finland

Janne Mustonen, eMBA
Key Account Director / ICT and Nano
BusinessOulu

Keywords

- Man to the Moon
- James Bond
- Oulu
- Wearable
- Moccamaster
- Volkswagen
- Digitalization or just Replacement Business
- 5G
- Oulu



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**Grand
Challenge
Finland**





"Every day some 2,6 billion people are utilising the technology that has been developed in Oulu"



Oulu Track Record in Wireless

- 2015** 5GTN - 5G Test Network.
- 2014** Full implementation of Li-Fi (Visible Light Communication)
- 2014** Two-front phone with inbuilt Electronic Paper Display
- 2013** World 1st ubiquitous indoor positioning solution
- 2012** World's 1st in printed intelligence (PrintoCent Pilot Factory)
- 2011** WIFIUS – High Capacity NextGen Cognitive Radio Solution
- 2010** World's First Fully 'Open' Mobile Device Powered by Moblin
- 2010** Linux Phone launch
- 2009** World 1st Cloud based mobile security services
- 2008** World 1st pedestrian navigation phone
- 2007** Launch of mobile Wimax test network
- 2005** The world's 1st public NFC user
- 2004** The world's 1st commercial Edge high-speed network
- 2003** Europe's 1st free urban area WLAN network
- 2002** The world's 1st WCDMA (3GPP) telephone call
- 2002** The world's 1st security OTA-services for Mobile phones
- 2001** The world's 1st security products for Mobile phones
- 1996** The world's 1st WCDMA telephone call
- 1993** Modern menu-driven user interface style for mobile phone
- 1992** The 1st contactless fare collection system for public transportation
- 1991** The world's 1st GSM telephone call
- 1991** The world's 1st GSM base station
- 1982** Europe's largest science park
- 1981** The world's 1st NMT network



Heart Rate Monitors - Polar



- more than 10 000 new Wearables to enter the market in 2016
- challenges like
 - antenna system design and connectivity
 - battery consumption
 - usability
- But the biggest challenge is????

Branding

- is it allowed to talk about it in Finland?

- Product (tangible or intangible)
- Value to the customer
- Business modell
- Product differentiation against competitors
- Market segmentation
- Brand segmentation: Economy, Standard, Premium, Luxury

MOCCAMASTER

H A N D M A D E



We don't buy cars, we buy brands

*"Our activities may focus on the automobile,
but the Volkswagen Group is far more than just a carmaker"*

	 Audi	 SEAT
ŠKODA 	 BENTLEY	
	 PORSCHE	
 Commercial Vehicles	 SCANIA	

Digitalization or Replacement Business

- market and demand exist
- customers are used to consume and pay for a similar service or product
- technologies and digitalization offer huge scalability

<i>Before</i>	<i>Product now</i>	<i>BusinessModel</i>	<i>Asset</i>
Walkman	iPOD	HW-selling supported by content	Hardware Design, Content and BD
Encyclopedia	Google	Sales of advertising space	BigData analyze and sales
Shell's parliament	Facebook	Sales of advertising space	BigData analyze and sales
Textmessage	WhatsApp	BigData-analyzing	BigData
DVD-rental	Netflix	Monthly payment	Movies, global
CDs	Spotify	Monthly payment	Music, global
Dating	Tinder	Monthly payment	BigData analyze and sales
Analog lock	iLoq	Hw-selling	Patents and locking business knowhow
Taxi	Uber	Comissions	Software and all car owners , global
Hotel	Airbnb	Comissions	Software and all space owners , global

NOKIA

5G

for people and things
everywhere



NOKIA



**The most intelligent
city in Europe
2012 & 2013**

Intelligent Community
Forum (ICF)

Thank you.

Janne Mustonen, eMBA

Key Account Director / ICT and Nano

janne.mustonen@businessoulu.com

www.businessoulu.com

+358 45 675 2929

*"All what can
be digitalized,
will be
digitalized."*

