Journey from One Million to One Billion

– Body Sensing Technologies with Smart Textile

AiQ®
Smart Clothing

StartupFest Health '19
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Chief Marketing Officer
AiQ Smart Clothing Inc.

IoT

Connected

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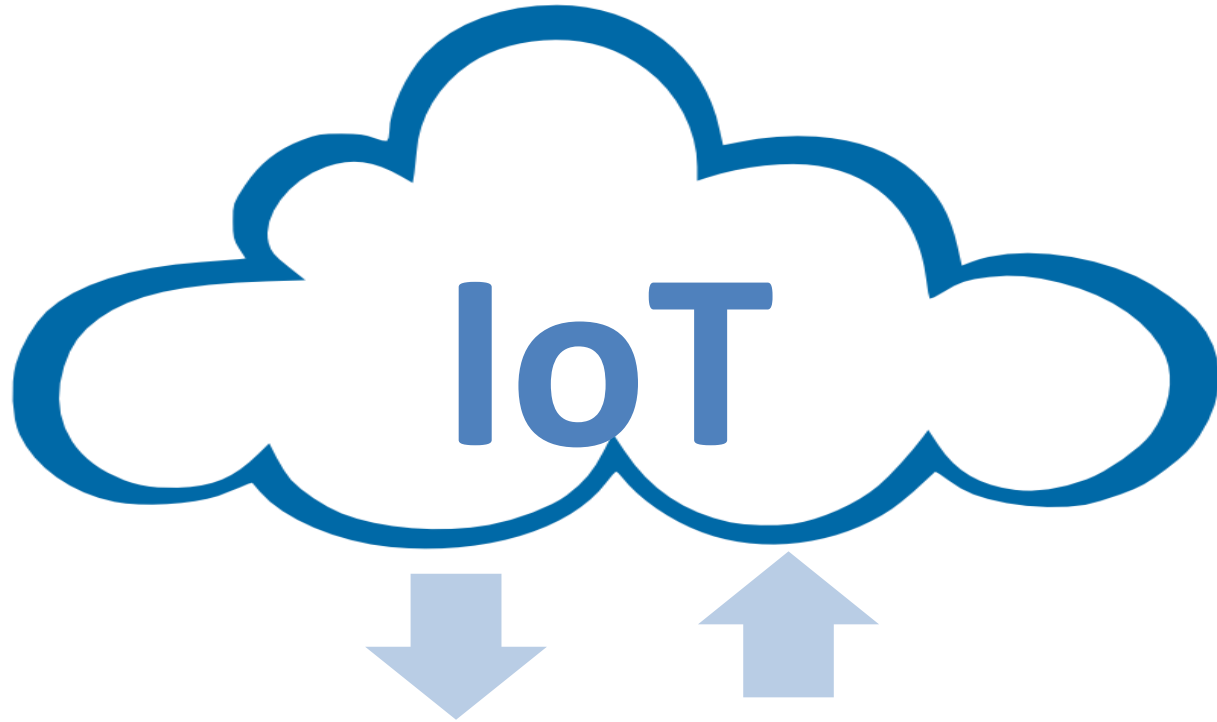
Why Clothing

- Protection from Elements

- Make People Look good

- Purpose has remained the same

- Even though it has grown - $1 trillion dollar + industry today

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Why Bring Technologies into Future Fashion

- **Creativity** : New inspiration with new elements for fashion design

- **Economics**: Create new niche to bring the higher value for the fashion industry

- **Applications** : Great application platform for the wearables

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Why Smart Clothing

- What will be the killer apps for the Smart Clothing ?
- Sports? Elderly Care? Fitness? Wellness?
- ECG? HR? Motion? Heating? Other vitals?
- Athletes? Professional workers ? Executives? Elderly people? Patients ....

We understand the challenges very well ......
Our mission is to build the "Internet of You"

Device Evolution – Ever Smaller, Ever Closer

Laptop

Palmtop

Bodytop

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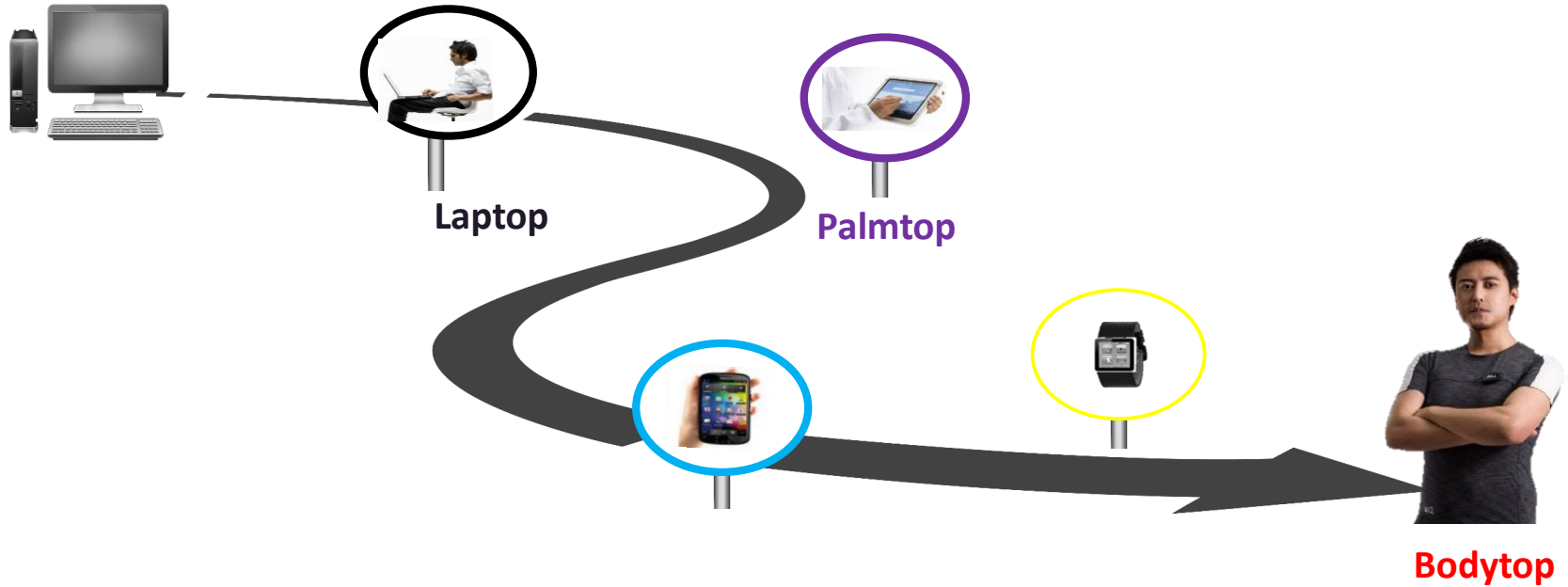
ExoNeural System

At AiQ, we are inspired by the human species in our design

- Humans have sensors and so do our designs
- Humans do sensor fusion and so do our designs
- Humans have neural networks as medium and we use conductive yarns
- Humans process and our designs process

In summary = our designs are very much inspired by how human body is designed. That's we call our designs ExoNeuralNetworks
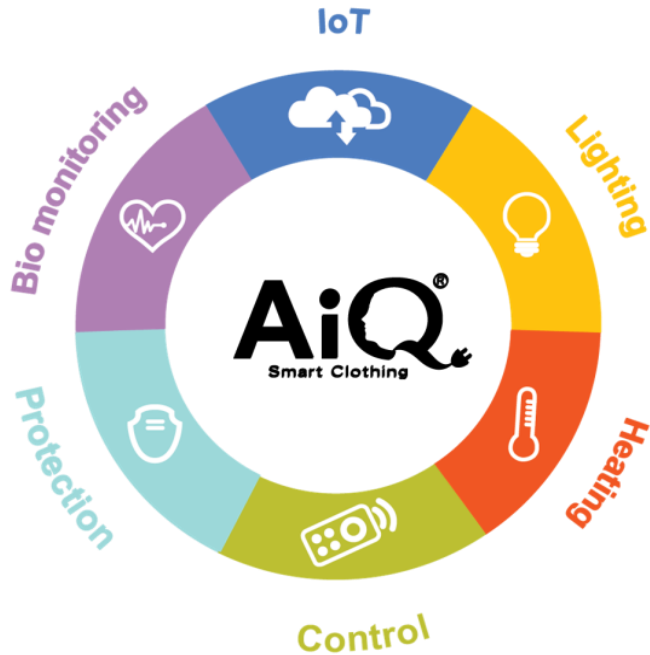
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Toolbox

From Concept to Real Applications Products

Expectation

EEG

Motion Capture

Fall Down Detection

EMG

Sports & Fitness
Step Counting
Speed
Calories
Altitude
Distance

ECG
Heart Rate
Heart Rate Variability
Respiratory Rate

PPG
SPO2

PPG
Blood Pressure
Skin Temperature
Body Temperature
Perspiration (Sweat)

SpO2

BP

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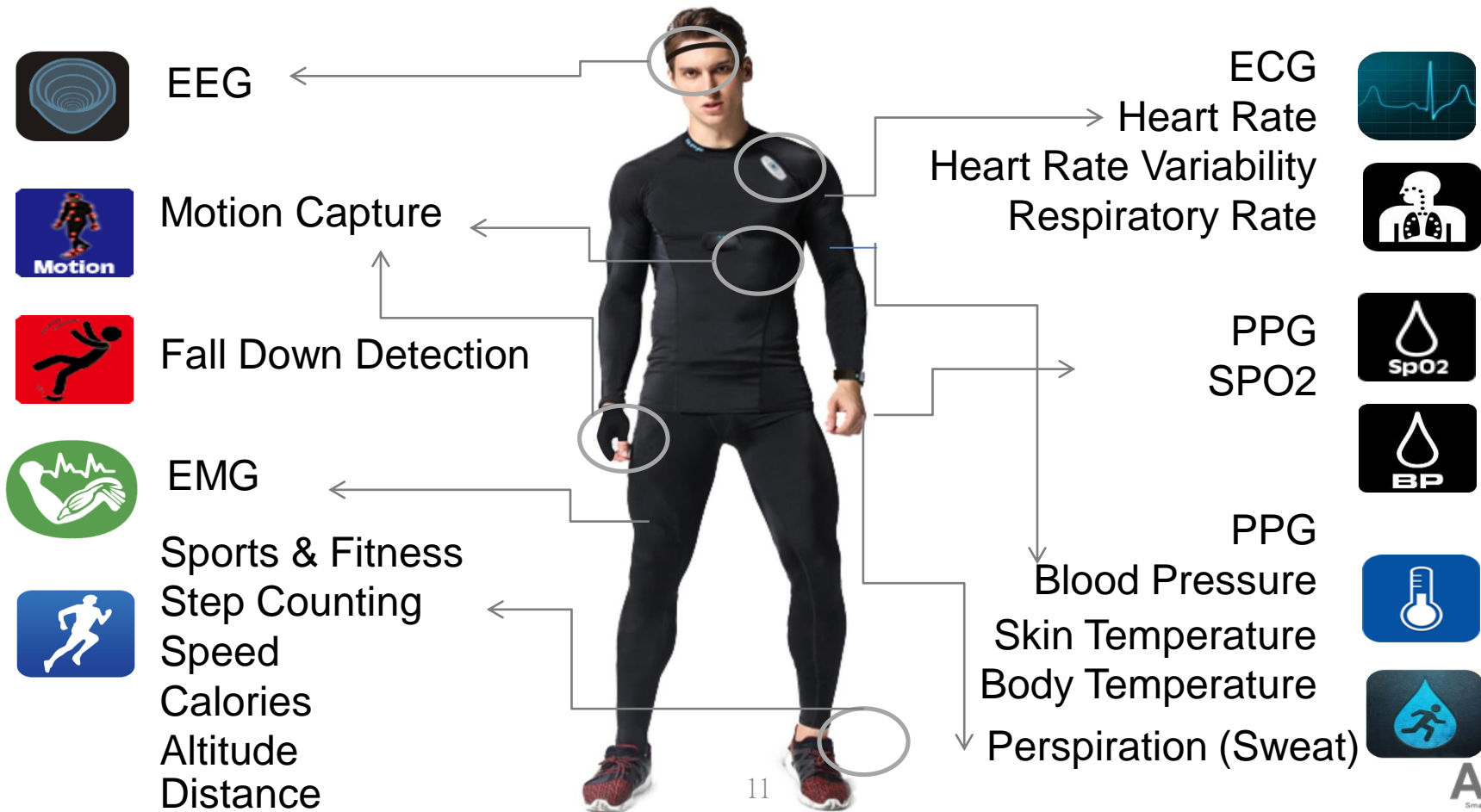
AiQ Smart Clothing Platform

Software Platform
- Android/iOS
- Big data/analytics

External Communication
- BLE
- WiFi / GPS
- 3G/LTE/5G
- LoRaWAN

Interconnect
- Analog
- I2C
- USB
- Antenna - RFID

Data Processing
- ARM M4
- Qualcomm Snapdragon

Sensors
- Heart Rate
- Temp
- EEG
- G-sensors
- Pressure
- Stretch
- ...

Energy Source
- Coin Battery
- Rechargeable Lithium Battery
- wireless charging
- energy harvesting

Actuators
- LED Light
- Heat
- Tense
- Haptic

Data

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6 Components of Smart Clothing

Clothing

Electronics

Interconnect &
Textile sensors

Firmware &
Algorithms

Application
Front-End
/UI

Back-
end/cloud
/server/databa
se/machine
learning

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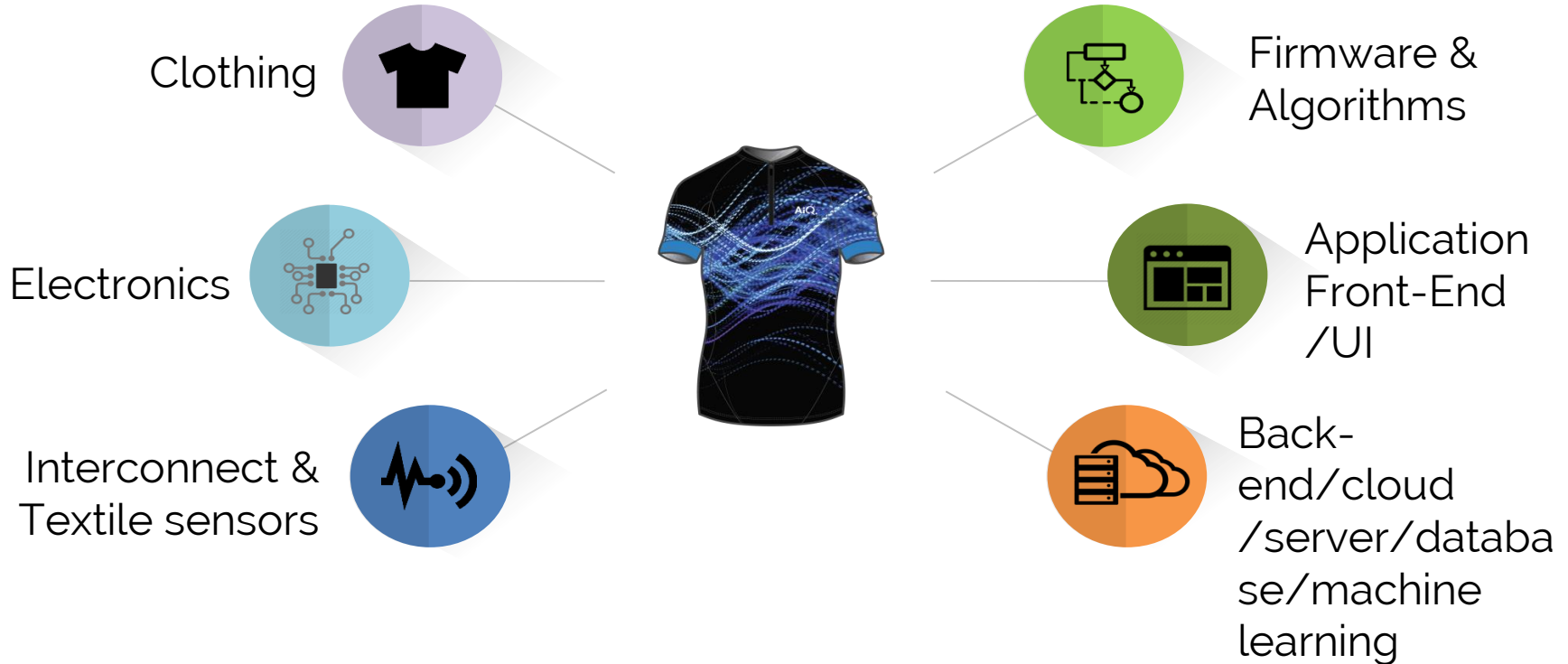
Human --Cloud

INTERFACE

HARDWARE/SOFTWARE

SERVICE PROVIDER

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Quantified Self

Major Applications

- Sports & Fitness - Digitize - Analyze – Advise

- VR Gaming – whole body in action & haptic response in reaction

- Healthcare –monitoring – convenient– continuous- comfortable

Comfortable

Washable

Reliable

Durable

Affordable

Fashionable

Dream Shirt

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Conclusion

➢ IoT and miniaturisation is pushing the frontiers of Wearables
➢ There is an even larger opportunity to extend the functionality of clothing
➢ Clothing is second skin and the original wearable
➢ A thoughtful strategy and ecosystem building is necessary
➢ We have the architectures necessary and we are executing to this vision
➢ The journey is long and arduous but we will reach our goals
➢ As the building blocks of a new internet - The internet of "YOU"
➢ Smart Textile can drive fashion to helps humans to lead happier, healthier lives with new technologies in smart living
➢ For smart textile industry , it is new materials to work on , new business models to evolve and finally --- the creation of a multi-billion dollar industry to be achieved

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Thank You

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www.aiqsmartclothing.com