Daily Technology

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Technologies used in day to day life

- Communication
  - SMS
  - Fax
  - E-mail
  - Video Conference
- Human relationships
  - Facebook.com
  - Twitter.com
  - Snapchat
  - Whatsapp
- Banking
  - Visa
  - MasterCard

Technologies used in day to day life

- Education
  - **My Library:** With this app , you can catalogue your books by scanning the ISBN with your ipad camera and it helps students get access to free eBooks.
  - **Book Crawler:** This app will solve the book catalogue problem for students, and it also has a location awareness which will help a student see what others around them are reading.
  - **Library Books**: This App can track multiple library cards and let you know when you've got a book coming due.

Technologies used in day to day life

- Agriculture

Picture 1 (Before Technology}

Picture 2 (After Technology}

Technologies used in day to day life

- Transportation

New technologies already available

- Monitor Eating Habits (HapiFork)

New technologies already available

- Data Security (Space Monkey)

New technologies already available

- Smart watch

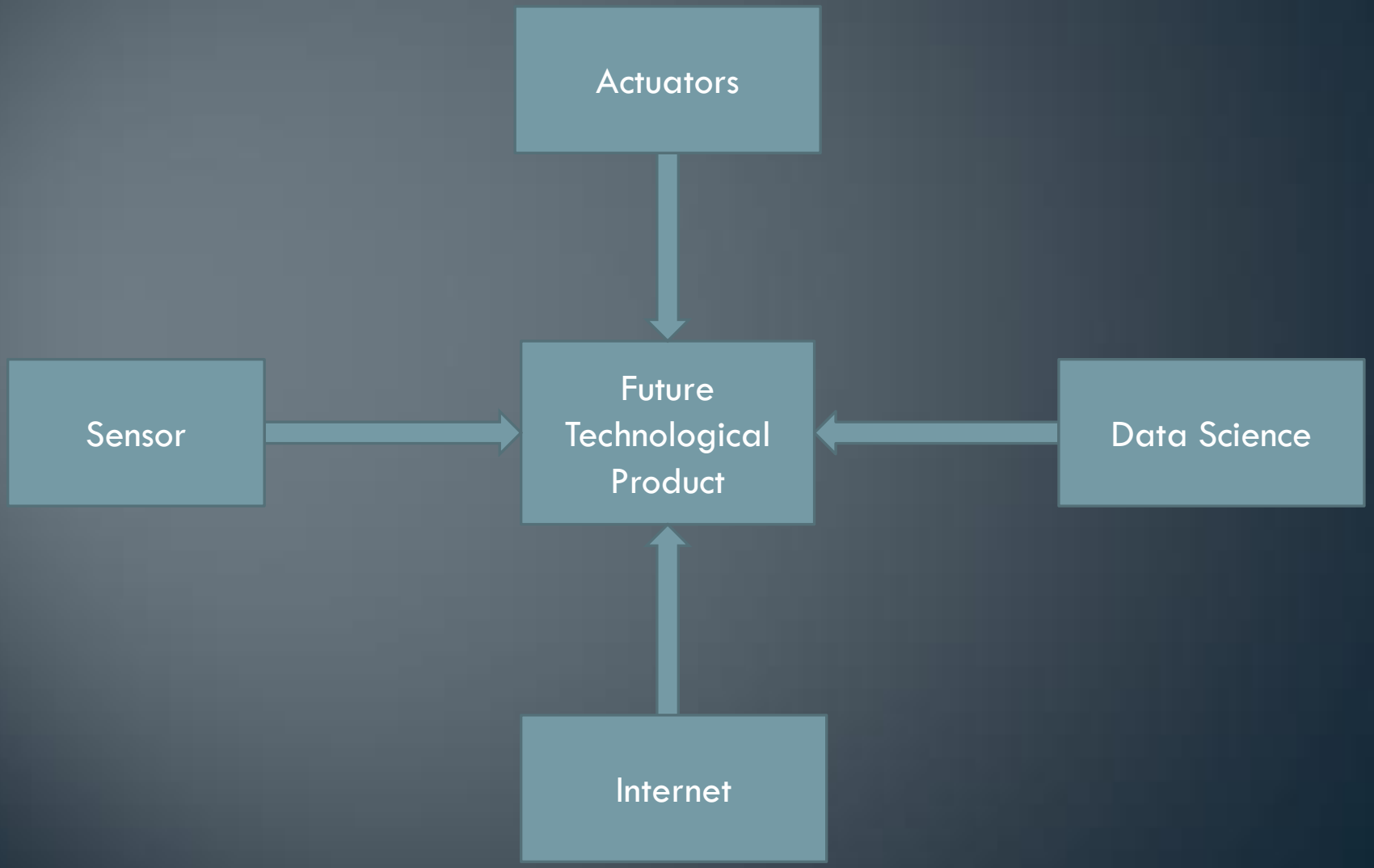
New technologies already available

- Luci Inflatable Solar Lantern

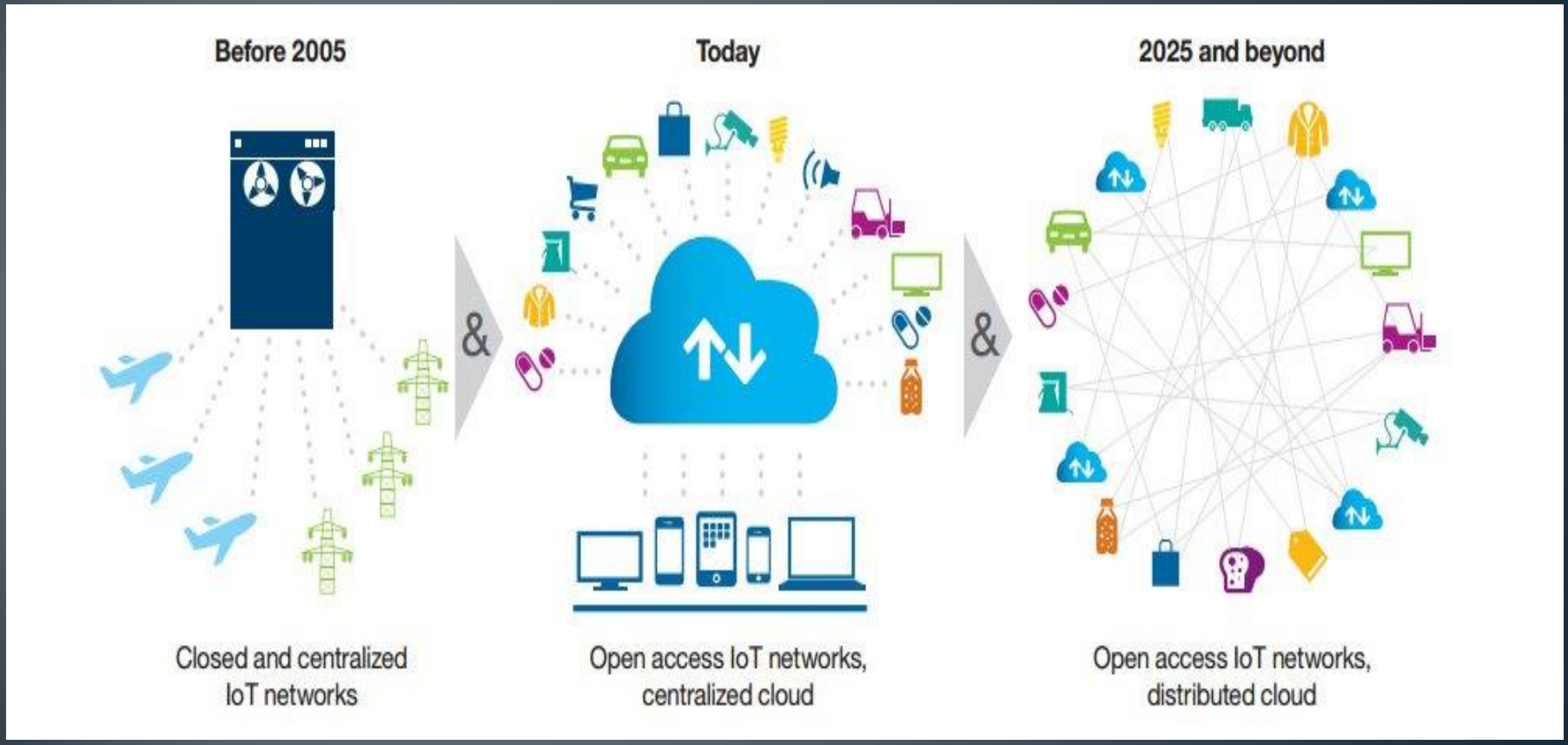
Technology Impacts Your Daily Life

- Improved Communication
- Improved Home Entertainment
- Improved Housing and Lifestyle
- Changed Health Industry
- Convenience in Education
- Convenience of Traveling

Future Technological Product



Internet of Things



What is the Internet of Things (IoT)

"The Internet of Things refers to uniquely identifiable objects (things) and their virtual representations in an Internet-like structure." – Wikipedia (link)

"The Internet of Things is the network of physical objects that contain embedded technology to communicate and sense or interact with their internal states or the external environment." – Gartner (link)

"The Internet of Things represents an evolution in which objects are capable of interacting with other objects. Hospitals can monitor and regulate pacemakers long distance, factories can automatically address production line issues and hotels can adjust temperature and lighting according to a guest's preferences, to name just a few examples." – IBM (link)

- With predictions that 66% of the world's population will live in urban areas by 2050, Internet of Things technology is increasingly drawing the attention of city planners, engineers and architects keen on staying ahead of the curve — they're imagining a world with smart street lamps, smart sidewalks and even smart sewage systems.
- "More and more cities understand the $3 trillion economic opportunity afforded by [the Internet of Everything], and they are taking actions to embrace features that provide greater engagement with citizens — smart parking, smart lighting, energy and waste management"

- "Energy savings can be increased by 30%, water consumption can be cut in half, crime rates can be lowered significantly and traffic could see a dip of up to 30%"

Internet Of Things will be everywhere. Likely in your field too.

Smart Home

Connected Car

Connected Body

Smart City

And: Agriculture, Logistics, Construction, Retail, ...

Picture Courtesy: Henning Boger

Case Studies

- Smart Agriculture project in Galicia to monitor vineyards with Waspmote
  - Challenge: Create a statistical model to predict the appearance of plagues with the vineyard with wireless sensor networks.
- Smart Water project in Valencia to monitor Water Cycle Management
  - Challenge: create a hybrid sensor network between mobile and fixed nodes and integration of water quality specific sensors.

- Smart City project in Serbia for environmental monitoring by Public Transportation
  - Challenge: deploy a mobile wireless sensor network with the sensor nodes located in vehicles.
- Smart City project in Salamanca to monitor Air Quality and Urban Traffic
  - Challenge: use one single sensor network infrastructure to monitor 7 environmental parameters and provide multiple services.

- Wireless Sensor Networks to control Radiation Levels
  - Challenge: fast design of a radiation detection sensor board for Waspmote in response to the accident in Fukushima.
- Detecting Forest Fires using Wireless Sensor Networks
  - Challenge: deployment of sensor networks in harsh outdoors environments.

Thank you