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ENHANCING THE CUSTOMER EXPERIENCE THROUGH INNOVATION

SAFMA Conference 2017
Keynote Address

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THE EVOLUTION OF THE CUSTOMER JOURNEY

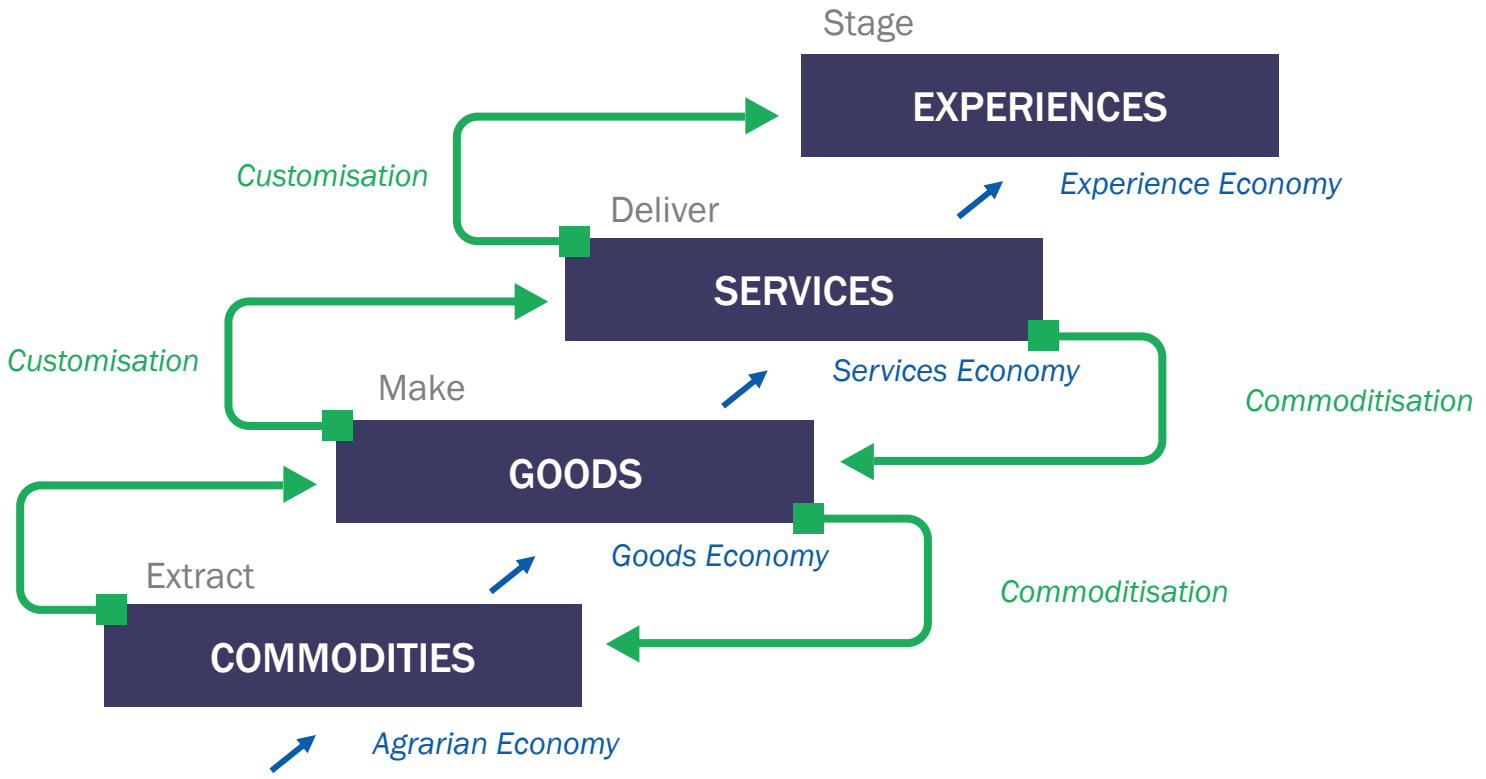
HIGHLY DIFFERENTIATED

COMPETITIVE POSITION

UNDIFFERENTIATED

WHAT IS THE EXPERIENCE ECONOMY?

The Progression of Economic Value



MARKET PRICING PREMIUM

Graphic adapted from HBR Welcome to the Experience Economy – July-August issue : B Joseph Pine II and James H Gilmore

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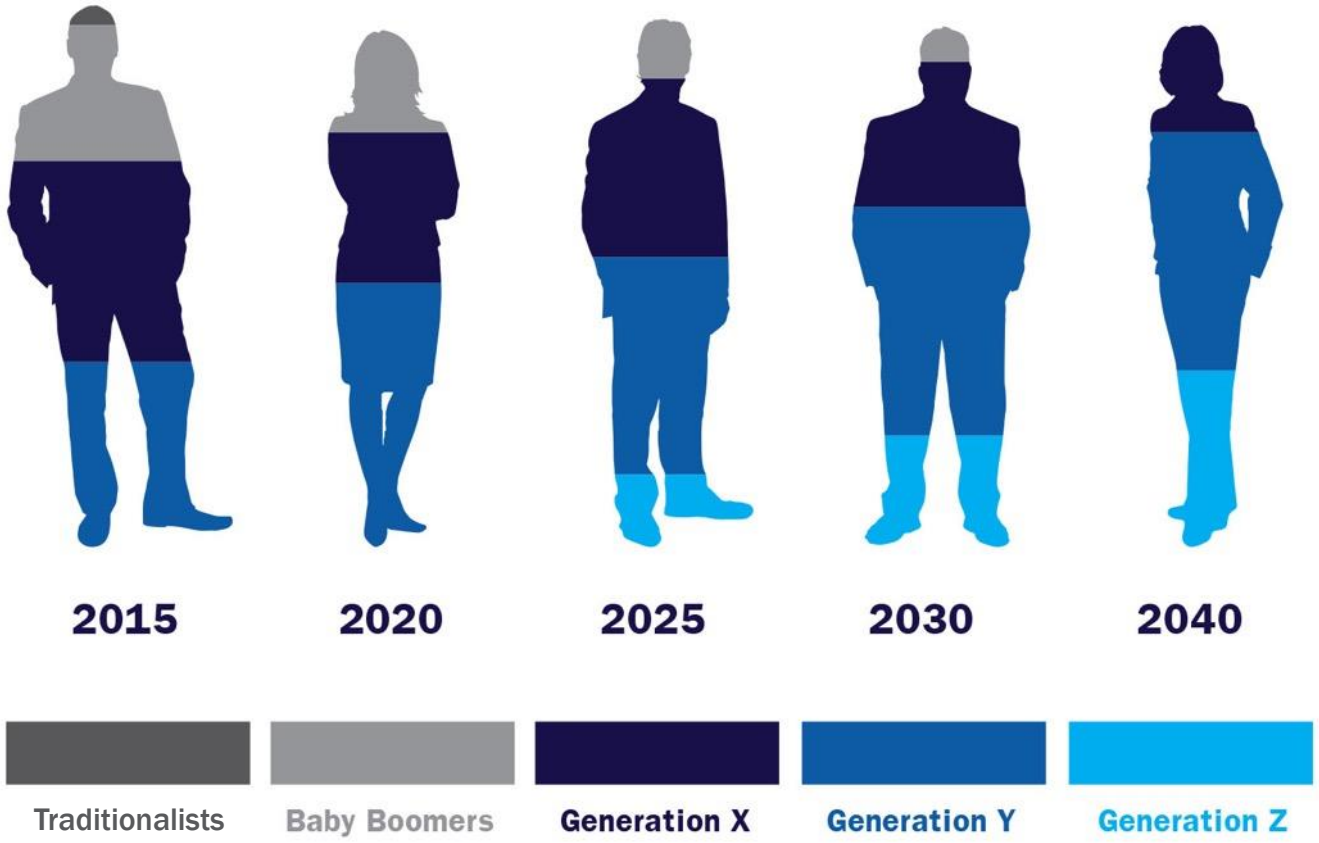
THE CHANGING CUSTOMER PROFILE

The changing customer demographic and the impact on experience



KEY CHARACTERISTICS OF MILLENNIALS OR GENERATION Y

- Born roughly between 1980-2000
- Gen Y makes up the fastest growing segment of the workforce in the 2010's
- First generation to grow up in constantly connected to the world
- Highly collaborative
- Highly tech savvy – plugged in 24/7
- Smart-phone & tablet obsessed
- Expect instant gratification, instant answers and instant services
- Emphasis on Technology which provides visibility through interactive dashboards
- Sustainability and socially conscious
- Require constant feedback and communication - FOMO
- Socially networked and connected
- Craves experiences

"Digital natives were all born after 1980 when social digital technologies became widely used; they all have access to networked digital technologies and they have the skills to use these." - **John Palfrey and Uri Gasse, 'Born Digital'**

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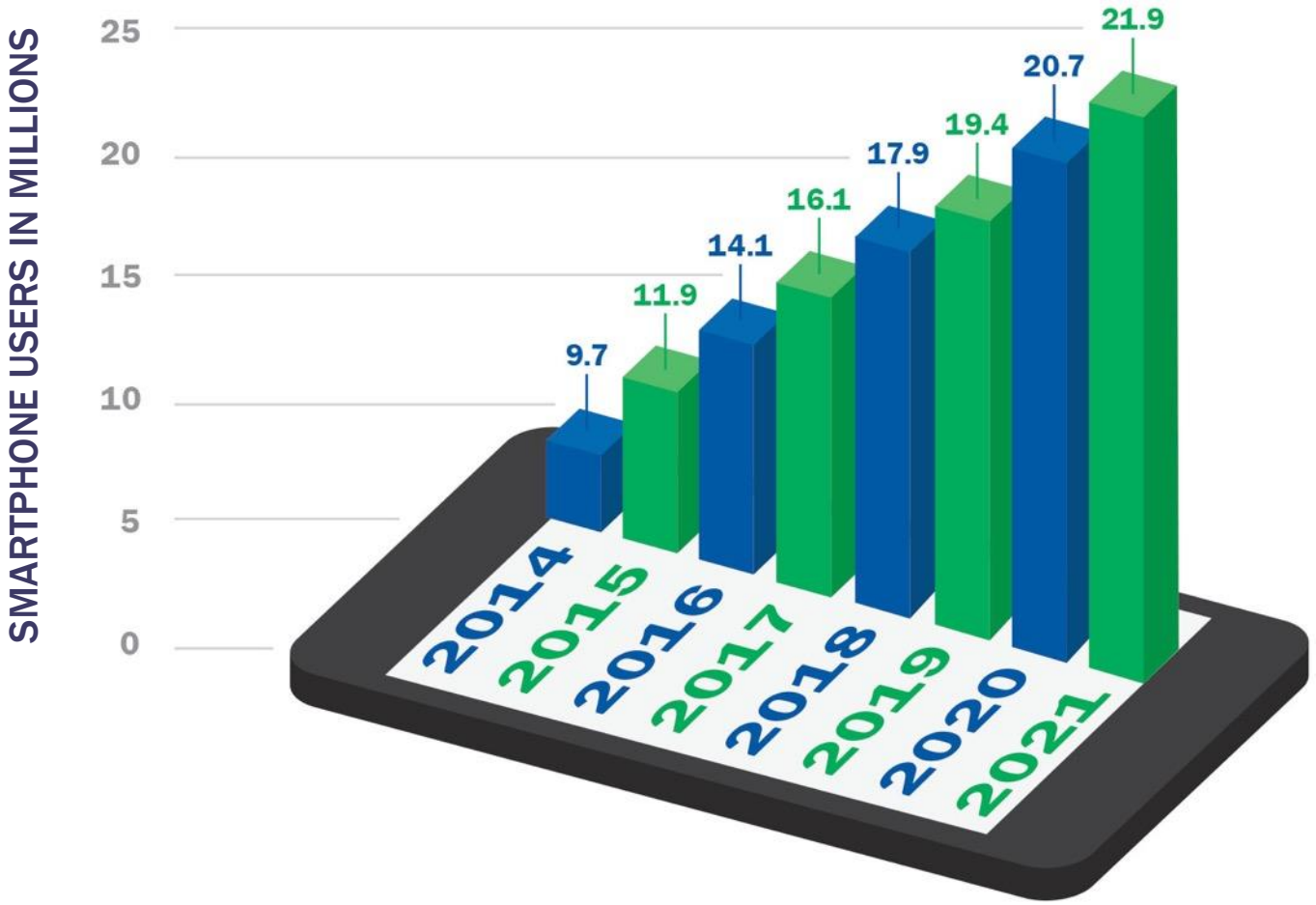
TECHNOLOGY TRENDS

Why technology trends are shifting customer behaviour and expectations



- The age of instant gratification
- Customers are more connected – and demand more transparency and honest communication and more collaborative
- First world populations now spend 151 minutes per day on smartphones, more than TV or laptops (Millward Brown, 2014)
- There are now over 20 billion connected devices
- 40% of mobile uses have a smartphone (Mary Meeker)

Smartphone user statistics:
Statista.com. 2017. Statista. [Online]. [1 May 2017]. Available from: https://www.statista.com/statistics/488376/forecast-of-smartphone-users-in-south-africa/

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WHAT DO CUSTOMERS EXPECT NOW?

Customers remember and value great experiences that demonstrate deep understanding and respect of their needs.

When companies learn how to deliver and evolve differentiated experiences, they tend to build strong, enduring customer relationships and profitable businesses.

Apple Inc.

Consistently great customer experiences

Pace versus precision

Sense of urgency

Real-time management information

AND THE MANAGEMENT OF FACILITIES IS NO DIFFERENT!

The approach to facilities management has evolved, although adoption is slower when compared to more consumer driven industries

The customer has evolved and so also have their new needs, wants and expectations

The workplace is the stage for the experience

Facility managers no longer just manage equipment or services they create experiences

Facility management companies must respond quickly, effectively and holistically to the “new customer” or face the threat of becoming obsolete

THE EVOLUTION OF FACILITIES MANAGEMENT

SILOED SERVICES

- Highly Reactive
- Simple equipment
- Janitorial
- Handyman
- Gardening
- Waste removal

In-house

SERVICE BUNDLING

- Hard & soft services
- Managed reactively and largely manually
- Semi-defined Processes and procedures

In-house

FACILITY MANAGEMENT

- Contract management
- Outsourced hard & soft services
- Start of FM automation BMS, etc. but still disparately

Hybrid In-house / Outsource

INTEGRATED FACILITY MANAGEMENT

- Evolved contract management
- Bundling of hard and soft services
- More scientific proactive approach
- More value add generated
- Energy management

Total Outsource

COMPLETE WORKPLACE MANAGEMENT

- Digitisation
- Big Data
- Intelligent buildings
- IoT
- Transparency
- More informed
- User defined unique experiences
- Connected devices and appliances

Total Outsource

· Basic - Little Sophistication
· Products/Services

· Customer Expectations

· Advanced - Highly Sophisticated
· Lasting Customer Experiences

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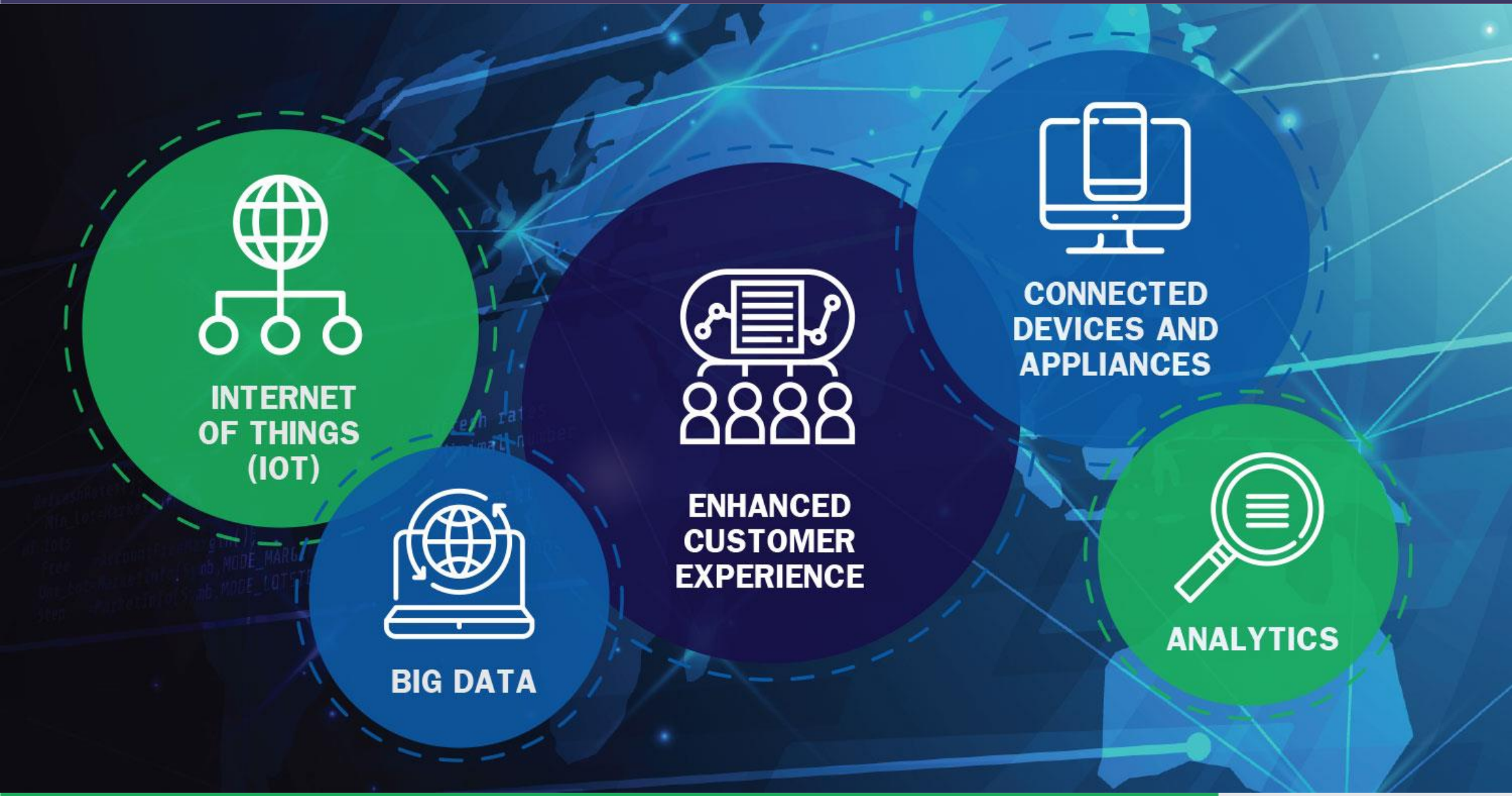
ENHANCING THE EXPERIENCE IN FM THROUGH DIGITISATION



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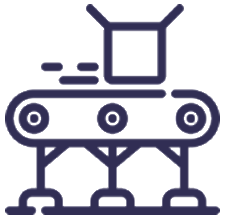
IoT IN PRACTICE

RETAIL & CONSUMER SERVICES

- The customer experience can be personalised through product recommendations and location-based offers.
- Supply chain management can be improved using RFID tags.
- Indoor location-based services can use technology to help customers find products.
- Vending machines can be made smarter to provide personalised offers and to alert when out of stock.



MANUFACTURING

- Production can be automated by interfacing assembly machines to share information such as specification and destination.
- Logistics can be improved through sharing of manufacturing facilities.
- Defects can be identified and removed through post-production tracking.
- Output can be optimised through analysis of the production process.
- Stock holdings and logistics can be optimised by tracking individual stock items rather than entire pallets.

AUTOMOTIVE

- A driver's experience can be personalised with 'infotainment' services that sync with smartphones.
- Maintenance and performance can be improved through analytics.
- Dealer visits can be reduced through over-the-air software updates.
- Anti-theft solutions allow vehicles to be tracked and remotely disabled.
- Rescue locations can be pinpointed through emergency distress beacons.

IoT IN PRACTICE

TRANSPORT

- Downtime can be minimised and efficiency improved through the predictive maintenance and monitoring of logistics vehicles and aviation.
- Train derailments can be prevented by merging data from GPS, tracks, cameras and other sensors to precisely monitor location.
- Logistics can be streamlined through location tracking and load planning.
- Taxi services like Uber can be provided through smartphone apps and connected cars.

FUTURE CITIES

- Law enforcement and public safety can be improved by analysis from crime data.
- Public safety can be improved and costs can be reduced with smart lighting.
- Congestion can be reduced by tracking highway vehicle flow.
- Energy consumption can be reduced with smart buildings.
- Water can be preserved by predicting floods and reducing leaks.
- Waste collection can be optimised via sensors attached to bins.

HEALTH

- Chronic conditions can be remotely monitored through wearables and ingestibles.
- The location and usage of medical equipment can be tracked remotely to improve efficiency and availability.
- The vulnerable and elderly can be monitored.

UTILITIES

- Smart meters can provide time-based consumption data and enable time-based billing.
- Smart grids can allow ‘demand response’, helping to manage peaks of energy consumption as well
- as micro-generation and renewables.
- Exploration and extraction can be improved by having better visibility of geological conditions.
- Production outages can be reduced through equipment monitoring and preventative maintenance.

THE INTERNET OF THINGS HAS ARRIVED…

BUSINESS DRIVERS

Cost reduction

Improved access to real-time operational data helps to eliminate waste and use assets more effectively.

Improved understanding and management of risk

Remote monitoring of customer behaviour and assets helps to identify critical events and automate the response to them.

Improved business agility

Provides a means to quickly react to events and scale rapidly thereby helping to mitigate risks and proactively leverage new business opportunities.

Generation of new revenue streams

Provides a direct connection with customers, enabling new services to be offered.

THE INTERNET OF THINGS HAS ARRIVED…

TECHNOLOGY ENABLERS

Pervasive connectivity

Existing cellular communications are being supplemented by new low-power technologies, which are cheaper and have a longer battery life.

Improved business agility

Provides a means to quickly react to events and scale rapidly thereby helping to mitigate risks and proactively leverage new business opportunities.

Low cost sensors

Sensor technology has matured to the point where sensors are small and cheap enough to be incorporated into almost any device, opening up new opportunities for IoT.

Smartphones and tablets

Smartphones and tablets contain a wealth of sensors and processing power enabling devices to be integrated.

Cloud computing

The availability of cloud computing lowers the cost and risk of experimenting with new IoT concepts and then scaling to meet growing demand.

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THE INTERNET OF THINGS HAS ARRIVED…

FACILITIES APPLICATIONS

Notifications and automated workflow triggers

- Preventative/Condition-based maintenance notifications reduces malfunctions and replacement
- Simplifies breakdown maintenance by generating a fault diagnosis and providing a list of maintenance items and tools to technicians to resolve more speedily.
- Incorporated dynamically into workflow repair instructions – promotes efficiency of technicians

Building capacity management

Monitor, manage and optimise utilisation of

- Parking
- Desks
- Meeting rooms
- Audio-visual equipment
- Catering applications
- Washrooms
- Corporate gymnasiums

Proactive management of requisite health and safety practices

- Compliance to prescribed statutory requirements

Provides a seamless customer experience

- Proactive management
- Interactive communication with customers

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WHAT IS BIG DATA?

> ***Big Data*** *is like teenage sex...*
> *Everyone talks about it, nobody really knows how to do it, everyone else is doing it, so everyone claims they are doing it.*
>
> - **Dan Ariely, Professor at Duke**

SIMPLY PUT:

- **Big Data** is being generated by everything around us at all times.
- Every digital process and social media exchange produces it.
- Systems, sensors and mobile devices transmit it.
- **Big Data** is arriving from multiple sources at an alarming velocity, volume and variety.
- To extract meaningful value from big data, you need optimal processing power, analytics capabilities and skills.

THE EVOLUTION OF BIG DATA - ANALYTICS

Big Data is changing the way people within organizations work together. It is creating a culture in which business and IT leaders must join forces to realize value from all data. Insights from big data can enable all employees to make better decisions—deepening customer engagement, optimizing operations, preventing threats and fraud, and capitalizing on new sources of revenue.

Competitive Advantage

Data is emerging as the world's newest resource for competitive advantage.

Decision Making

Decision making is moving from the elite few to the empowered many.

Value of Data

As the value of data continues to grow, current systems won't keep pace.

CUSTOMER ANALYTICS

- Uncover consumer insights with predictive analytics
- Effectively improve customer experience
- Drive customer satisfaction and maximizing brand loyalty.

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FUTURISTIC FM

Some examples of new technologies changing the FM industry…

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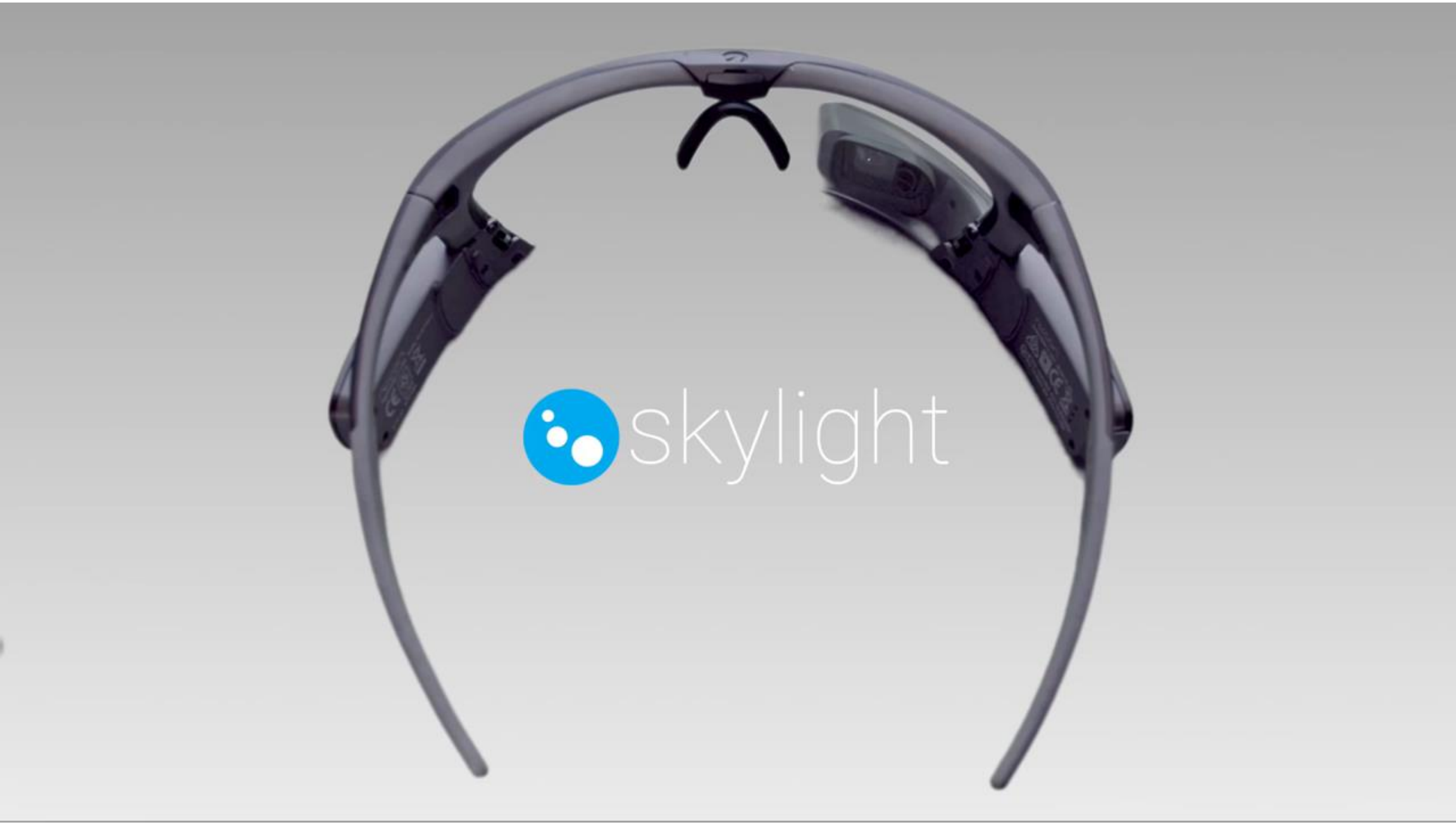
SKYLIGHT TECHNOLOGY

- Skylight is an end-user application that runs on the wearable device
- It connects to a real-time back-end system which powers the business solution
- Remote colleagues and supervisors monitor and collaborate using a web application
- Limitations: network coverage and bandwidth constraints
- Upskilling the workforce


skylight

DRONES FOR INSPECTION

Mast inspections

Solar PV panel inspections

Security perimeter inspections - heat sensing

Video: R.H.P., 2017. YouTube. *YouTube*. Available at: https://www.youtube.com/watch?v=WzNsWLsDwWw [Accessed May 9, 2017].

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Galileo

NEW TECHNOLOGY COMES WITH RISKS

While big data can provide significant value, it also presents significant risk. Organizations must be proactive about privacy, security and governance to ensure all data and insights are protected and secure.

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CONNECTED DEVICES: HACKED IN MINUTES

USA TODAY/AVANT-GUARDE CYBER SECURITY STUDY:

- 6 PCs were directly connected to the Internet
- 305 922 attacks began instantly
- Intruder successfully broke in within 4 minutes
- Most attacks were automated (Bots, not live hackers)
- Machines with security patches attacked the least

HACKER FRIENDLY SITES:

ZoomEye

SHODAN
Computer Search Engine

censys

DEFENDING AGAINST THE THREATS: BEST PRACTICES

People, Processes and Technology

– Security isn't "Just an IT thing"

Cybersecurity

- Must be conveyed as a priority from the top down

Lessons to learn

- Keep antivirus software up to date
- Don't surf the web from a BMS/IoT machine
- Don't check email from your BMS/IoT machine

Protect BMS/IoT machines

- In the 6 months of June – November 2016, nearly one billion total malware incidents were reported
- Email is the #1 delivery vehicle
- Website is the #2 delivery vehicle

Have a plan

– "I won't get hacked" is not a strategy

THIS IS THE FUTURE OF FM

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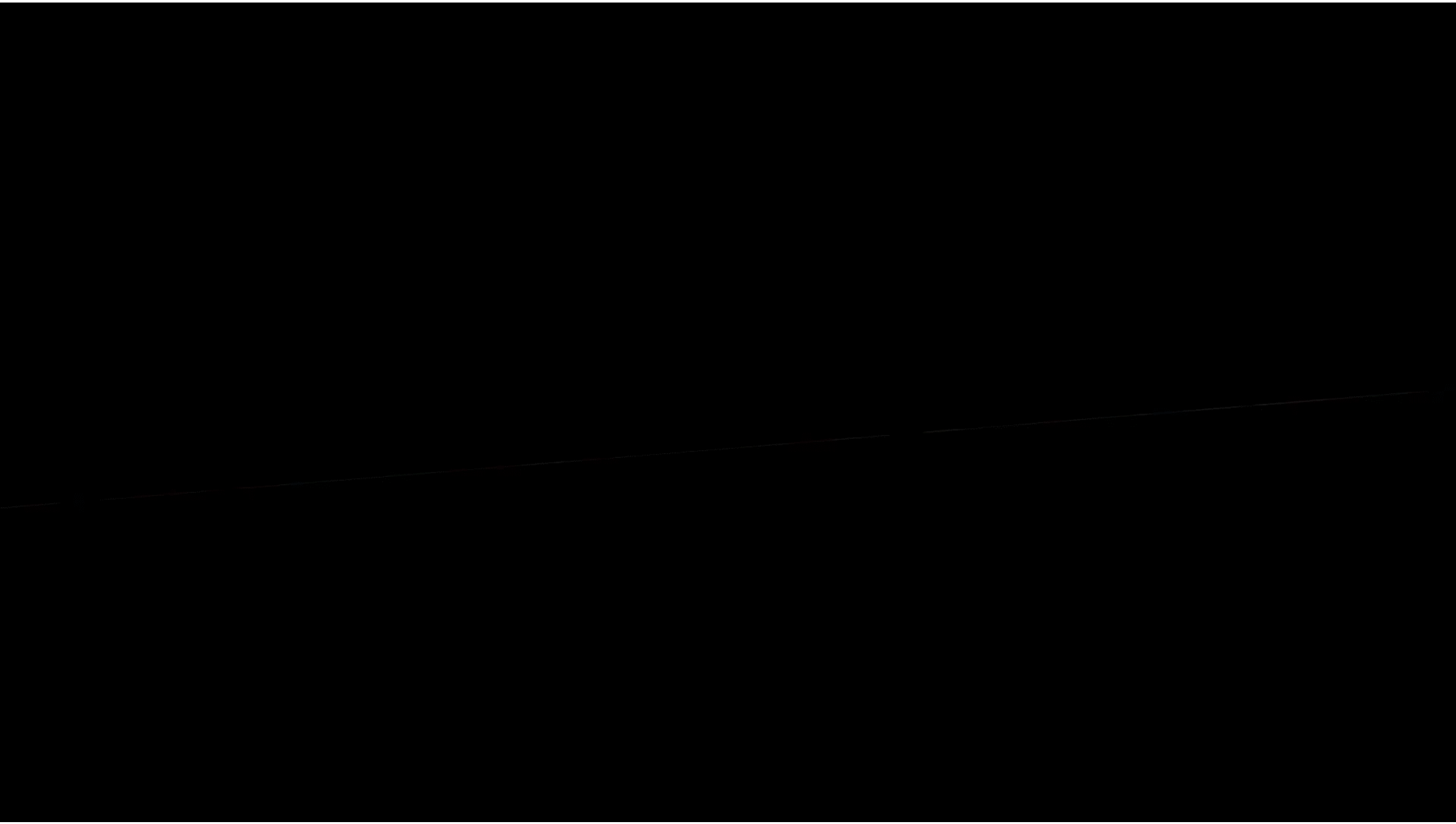

QUESTIONS & COMMENTS?

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