Internet of Things - PoCs for Insurance Domain
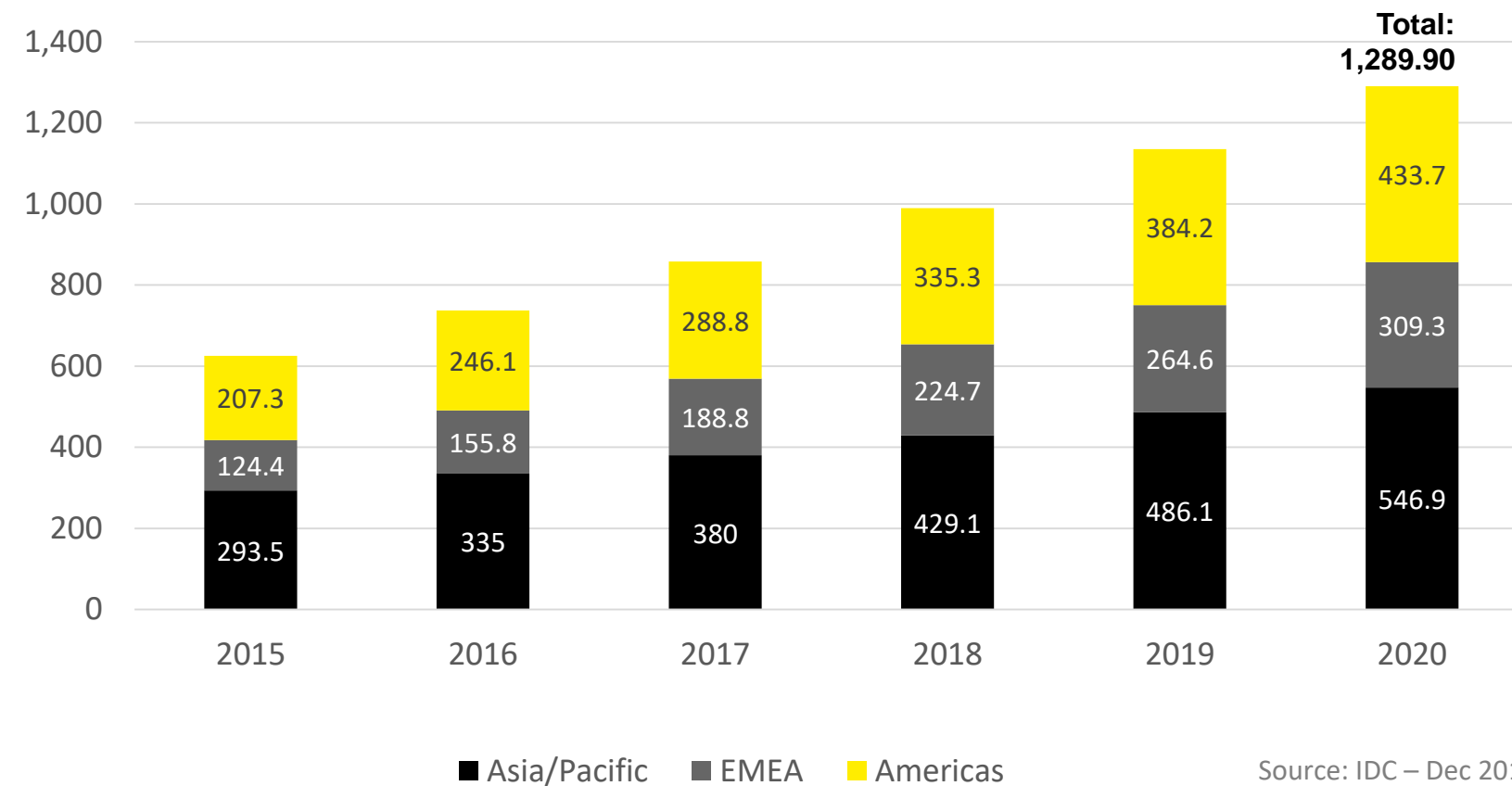
22nd May 2018

DXC.technology

Agenda

- ➢ **Overview – Importance of IoT in Insurance Domain**

- ➢ **Mold & Fungus PoC**

- ➢ **Demonstration of working Solution using actual IoT Sensors/Devices**

- ➢ **Q & A**

Worldwide IoT Spending by Region, 2015–2020 ($B)

Year	Asia/Pacific	EMEA	Americas
2015	293.5	124.4	207.3
2016	335	155.8	246.1
2017	380	188.8	288.8
2018	429.1	224.7	335.3
2019	486.1	264.6	384.2
2020	546.9	309.3	433.7

Total: 1,289.90

■ Asia/Pacific ■ EMEA ■ Americas

Source: IDC – Dec 2016

Insurance Sector: Business challenges

In typical Home insurance products, any loss results into claim(s).

Limited predictive / preventive mechanisms is in place for any of the losses.

Proposed Solution

- Earthquake Loss - Use **Vibration sensors** to monitor the building foundation
- Mine Subsidence and Sinkhole loss - Use Vibration, **Displacement sensors**
- Forest fire detection - **Smoke/Fire detector**. Monitoring of combustion gases and preemptive fire conditions to define alerts.
- Water/Sewer Drain Loss - **Monitoring of flow, leaks , pressure, levels , load , strain**
- Windstorm; Hurricane; & Hail losses - Monitor using **Vibration sensors, GPS, weather forecast**.
- Mold or Fungus loss - Monitor **Humidity/Moisture sensors**.

Mold & Fungus: Business Case

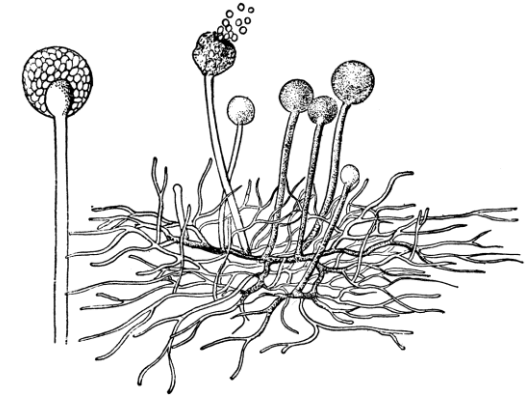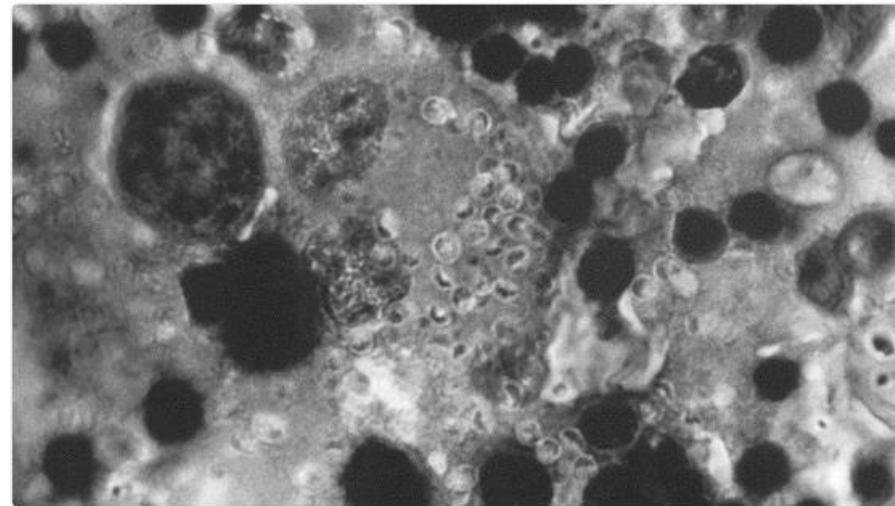**Fungi kills an estimated 1.5 million people globally each year**

- **2X Breast Cancer deaths**
- **Greater than Malaria deaths**
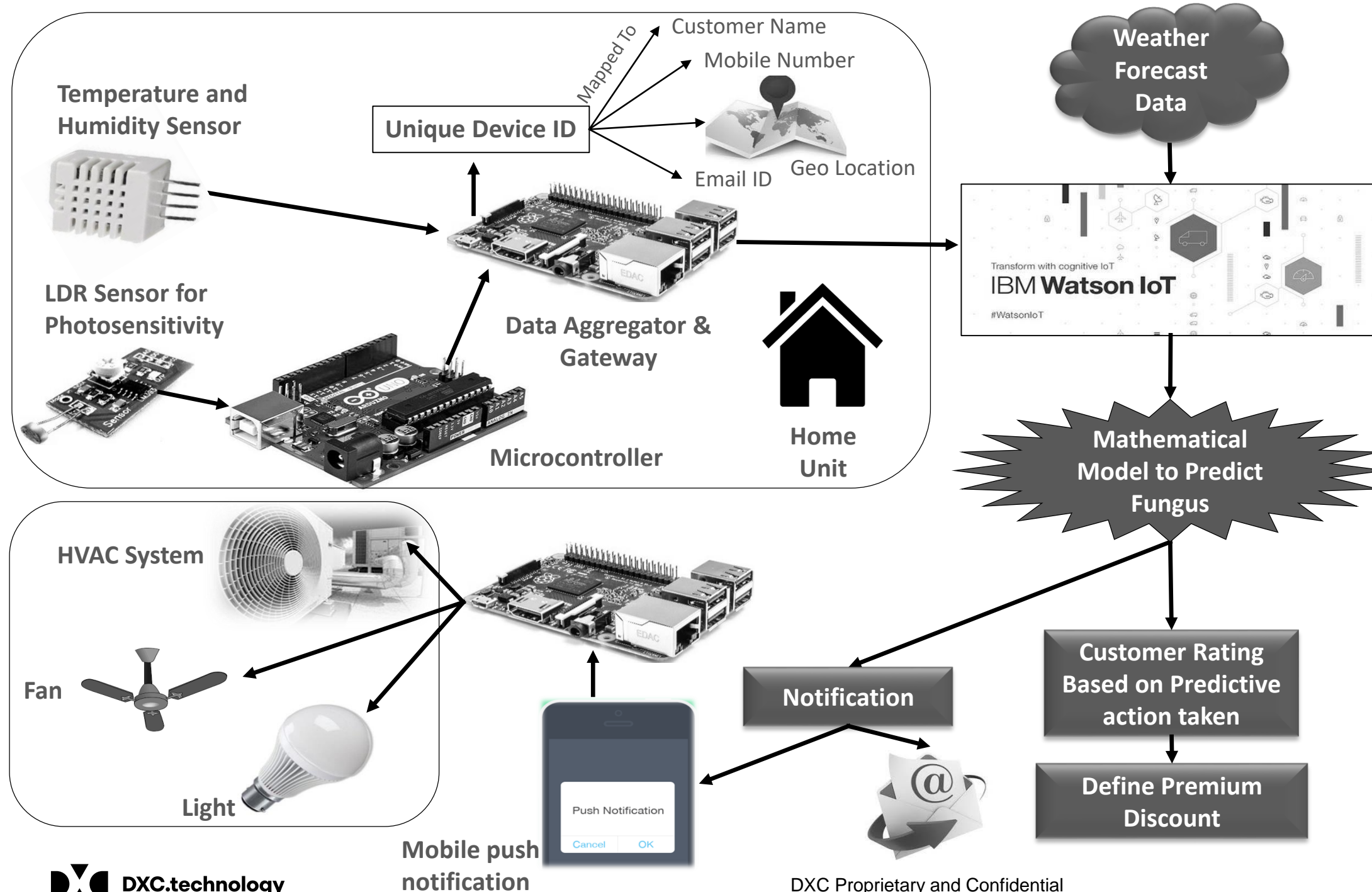- **Same no. of deaths as Tuberculosis, HIV**

How fungal diseases kill an estimated 1.5 million people globally each year
cnn.it/2d7koh4

Mold and Fungus Issues

- Mold is a common type of fungus that thrives in moist, warm conditions.
- The spores they release causes illness to humans.
- Buildings get damaged due to fungus
- The growth of mold claims has been exponential in the past years
- Sizable mold claims are pending in the United States, particularly in Florida, California, Texas, and Arizona.

Mold & Fungus Prediction: High Level Solution

Temperature and Humidity Sensor

LDR Sensor for Photosensitivity

Unique Device ID

Mapped To

Customer Name

Mobile Number

Email ID

Geo Location

Data Aggregator & Gateway

Microcontroller

Home Unit

Weather Forecast Data

Transform with cognitive IoT
IBM Watson IoT
#WatsonIoT

Mathematical Model to Predict Fungus

HVAC System

Fan

Light

Notification

Customer Rating Based on Predictive action taken

Define Premium Discount

Mobile push notification

Push Notification
Cancel   OK

- ❑ Pre-empt losses (thereby reducing claims) using Internet of Things (IoT) / Sensing technology through predictive and preventive modelling.

- ❑ Using IoT/sensing technology, data (moisture, humidity, temperature, Light Sensitive, etc.) will be collected, transmitted, stored, processed and visualized.

- ❑ "Anomaly detection" machine learning algorithm will be used to decide whether indoor situations are favorable for mold/fungi.

- ❑ Meaningful information gets shared with users on their mobile APP/ email inbox. The information will be used to pre-notify the users to take preventive measures to avoid any potential future loss.

Mold & Fungus Prediction: Key Benefits

Benefits for the Insured and for the Insurer

Benefits for the insured

- Improved Health
- Safer buildings
- Discounts for following safety measures

Benefits for Insurer

- Overall cost Reduction thru lowering of claims
- Improved risk Assessment and underwriting
- Improved customer retention

Over to Demo

Q & A

Thank you

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