



THE IOT ENTERPRISE: WHY YOUR ORGANISATION IS ALREADY IOT'D

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WHEN SOMEONE

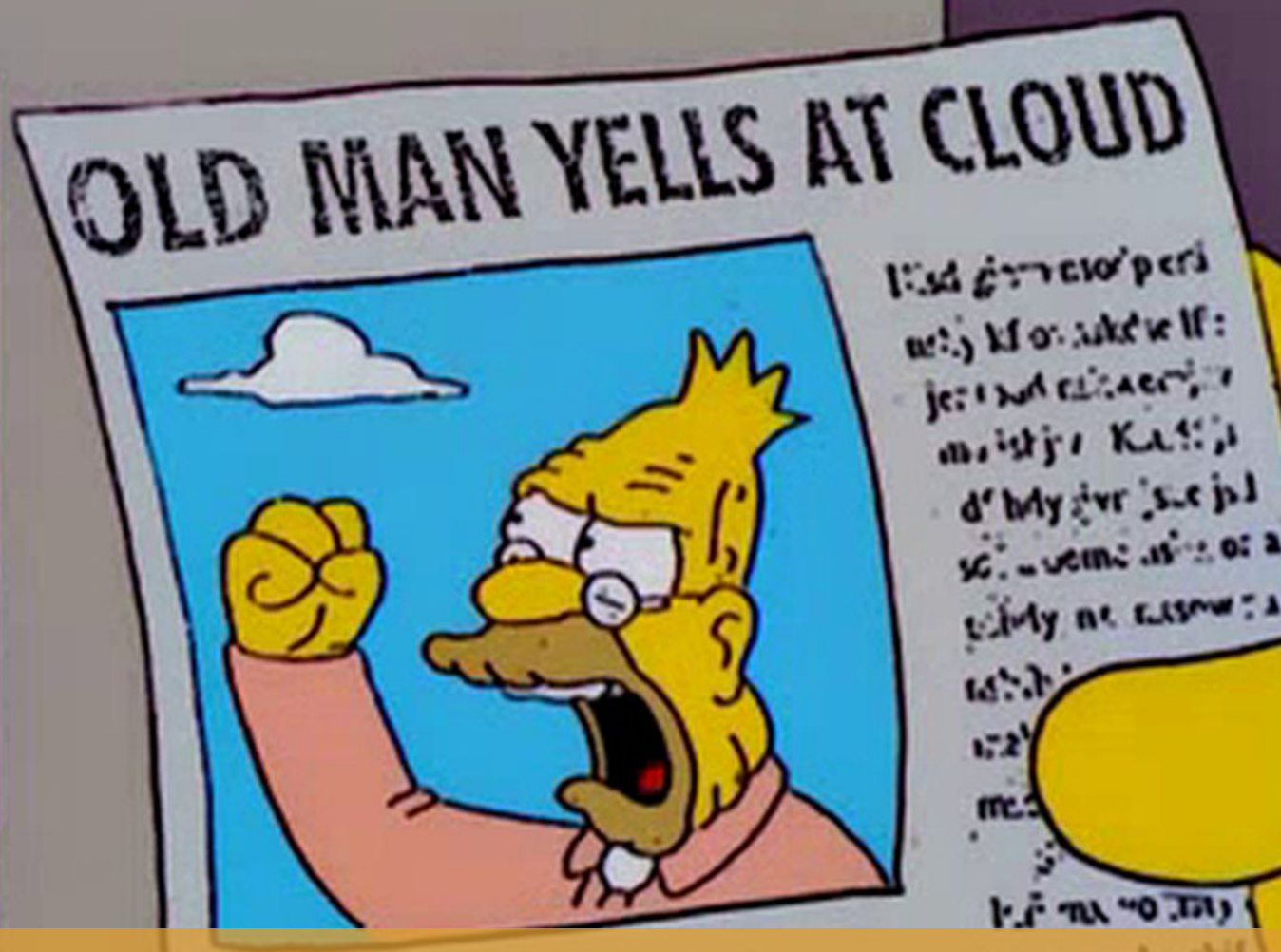


MENTIONS IOT SECURITY

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IOT SECURITY HYPE

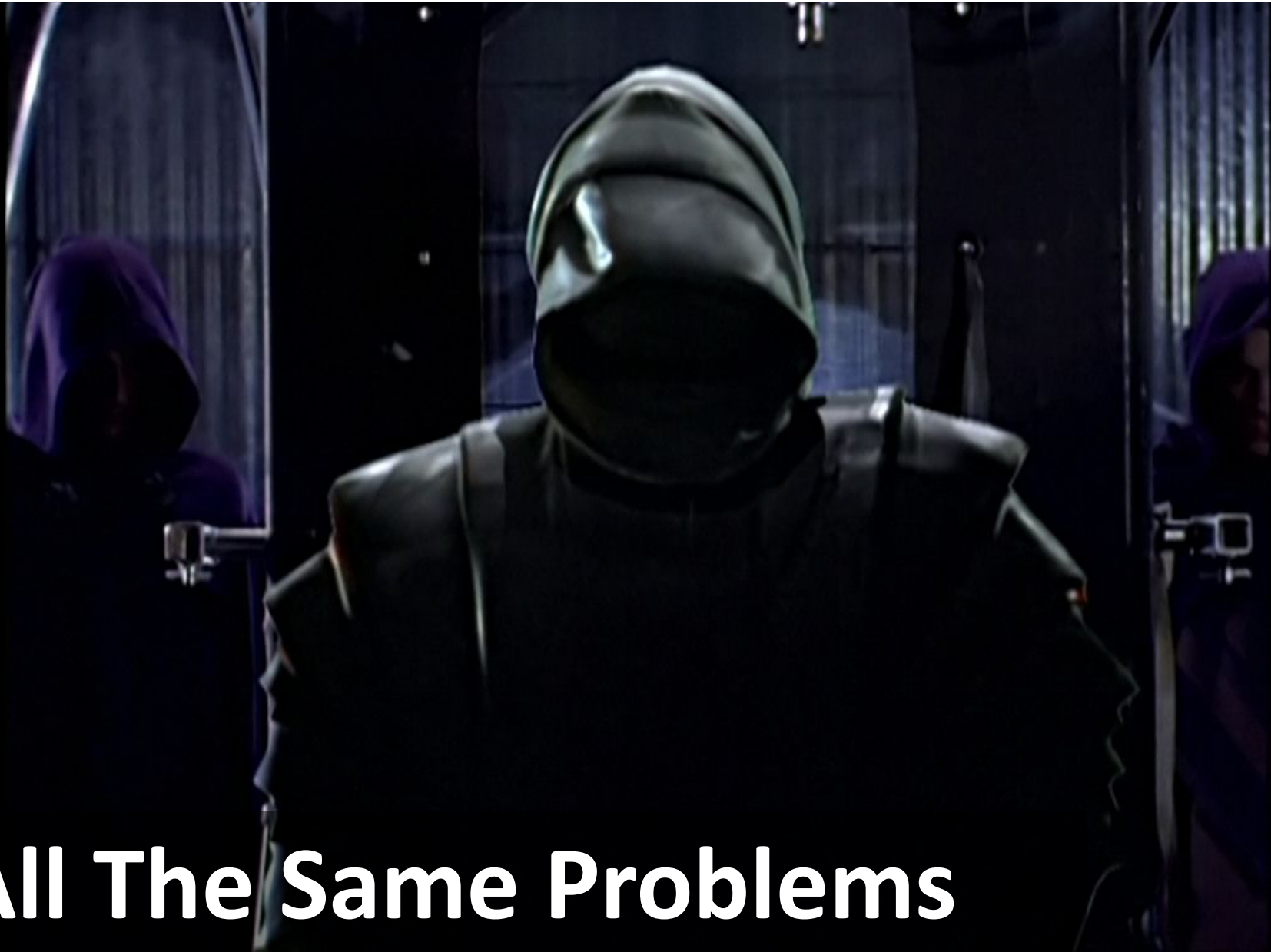
But Now It's Time
To Pay Attention &
Discover What's
Already Happening



We've Been Here Before

**The Era
Of
Shadow
IoT
Is Here**

With All The Same Problems



While The Focus Has Been On OT



Our Regular Enterprises Are Now IoT'd

10 BILLION DEVICES

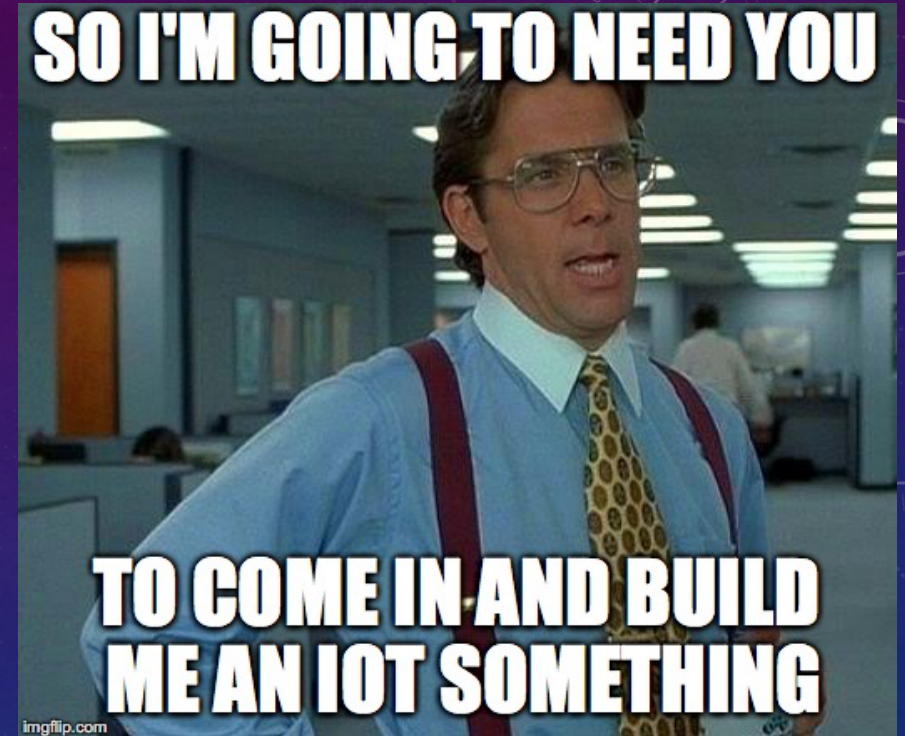
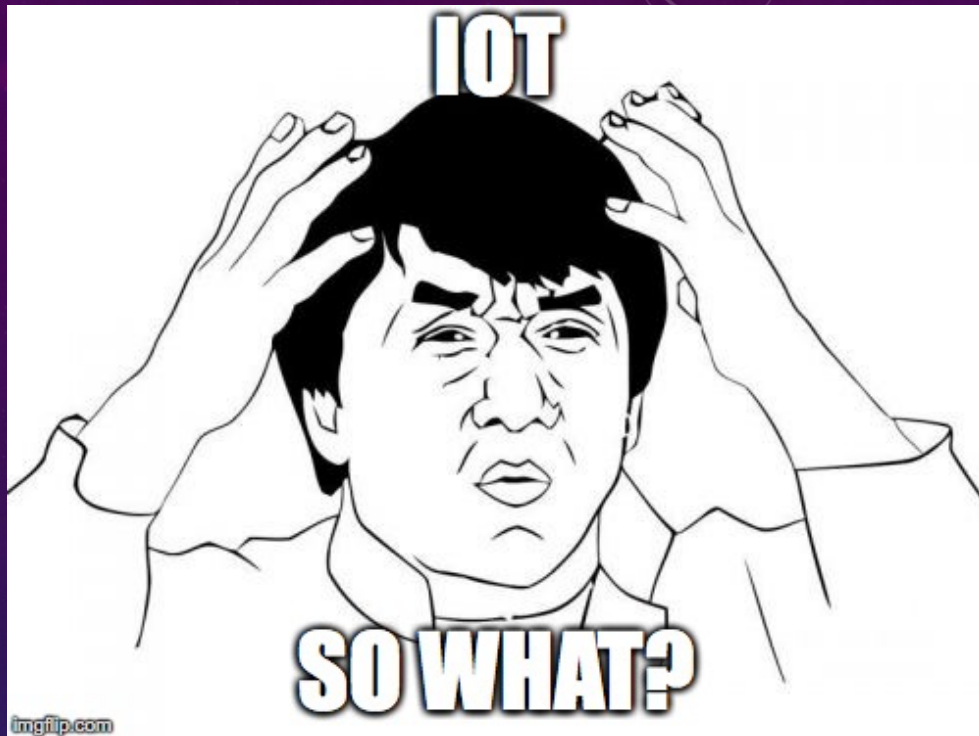
50 ZBYTES

50 BILLION DEVICES

100 ZBYTES

80 BILLION DEVICES

200 ZBYTES



*For Business Unit Leaders IoT Has Gone
From "So What?" to
"Do Something Now!" In The Last 2 Years.*

THERE'S TWO PARTS TO THAT

**Consuming IoT
For Internal Use**

**Consuming IoT
For Customer Use**

**And These Align With The Other Well Funded
Buzzword Of Digital Transformation**

THE BIG DRIVERS – INTERNAL USE

Short Term

Mid Term



Lighting Management
Typical 70% Energy Savings



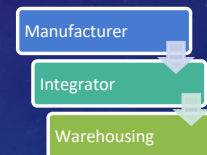
Improved Employee
Productivity & Satisfaction



Improved Use Of Workplace
Resources & Amenities



Business Process
Improvement



Supply Chain Visibility &
Automation



Predictive
Maintenance

THE BIG DRIVERS – CUSTOMER FACING USE

Short Term



Improved Customer Experience & Satisfaction



Upsell Additional Products & Services To Customers



Automate Field Service

Mid Term



Understand Product Usage



Create New Revenue Streams



Create New Business Models

Just Like Cloud In The Early Days

Security Is The #1 Barrier To Adoption

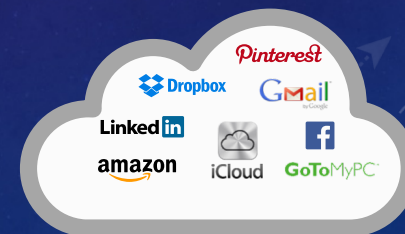
Many Devices & Platforms Lack Basic Security Hygiene



**Employees
Must Wash
Hands**

Especially Barry.





**Or Any One Of My
67 Connected
Devices**

No truck?



No worries mate

The Regular Tools Don't Fit Right

IMG CREDIT: <http://www.quickmeme.com/user/ISTJ1983>

Non-Ecosystem Consumer Devices

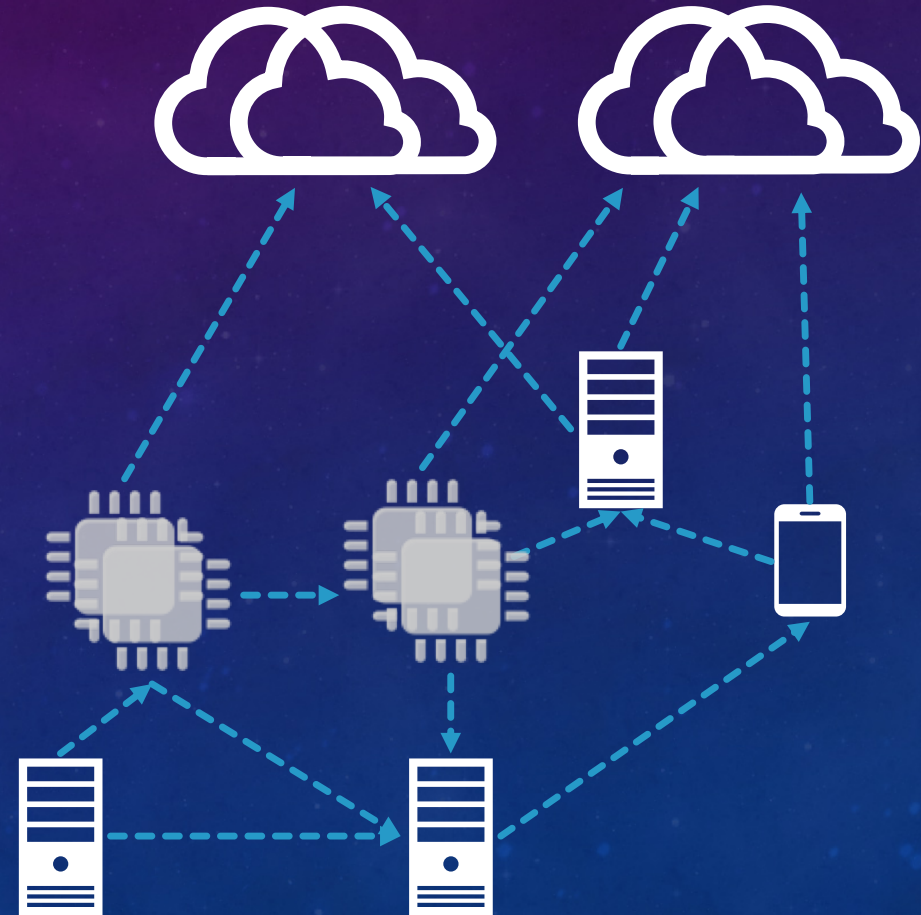


Ecosystem Devices



**EDGE PROCESSING
& CONTROLLER**

IoT, OT Hybrid Devices



PLATFORM EVOLUTION



**Complex, Multiple
Communications Systems**



**AI & ML First
Strategy & Design**



**Interaction With
OT Systems**



**Combined Edge
& Centralised Cloud Computing**




**Real-Time
Response**



**Automation First,
By Default Design**

**IT Networks Will Start To Adopt More Of These Concepts &
Overtime Look More Like IoT Networks**



1st Recommendation

Gain Visibility Of IoT Devices In Use

Look For Devices & APIs In Use

Look For Anomalies

Make Friends With Facilities & Your BMS

Monitor IoT Traffic At Gateways

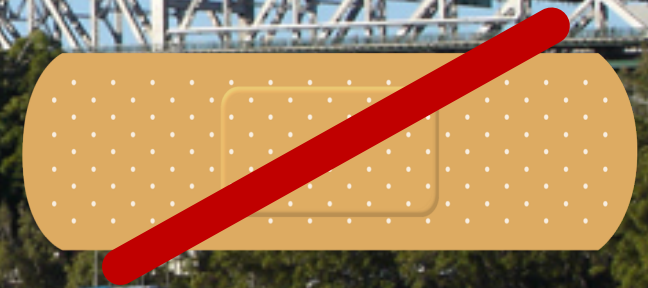
This Includes A Business Engagement Model

OH AND DO THIS FOR YOUR OT ENVIRONMENTS TOO

All Of The Problems With Old ICS Are Still There



Legacy OSes



Unpatchable Systems

After You Audit & Find This Stuff



2nd Recommendation

Develop An Assessment Policy For IoT

Can You Get Well Formed Logs?
Are Communications Encrypted?
Is There A Defined Lifecycle?
Is There A Secure Update Mechanism?
Assess The Cloud Service



http://community-sitcom.wikia.com/wiki/File:Spanish_classroom.png

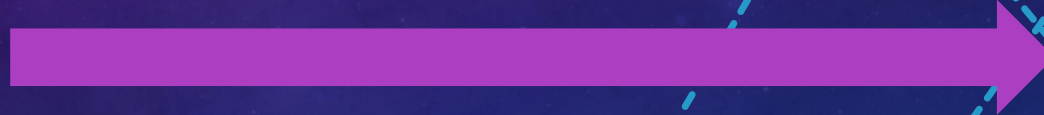
3rd Recommendation

Apply Hardening Everywhere

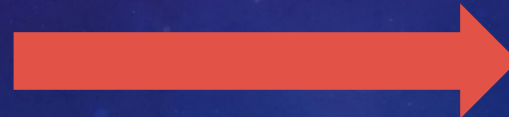
Apply Cloud Controls



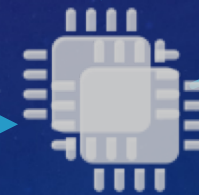
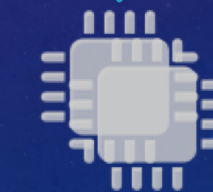
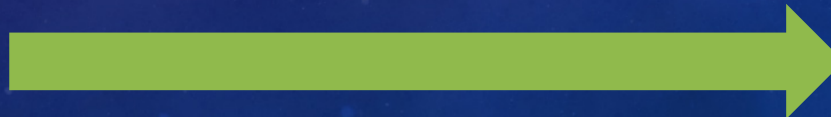
Harden Edge Compute



Apply Device Controls



Harden PLCs





THANK YOU

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