

# The Rise of the Machines

by Roy van de Water



What is the  
Internet of Things?



Smart Devices,  
Connected to Everything

















“The Internet of Things has the potential to change the world, just as the internet did. Maybe even more so.”

~ Kevin Ashton



**Today:** 1.9B connected devices.

50B estimated by **2020**.



By **2020**, the IoT market value is predicted to be between **\$3T** and **\$14T**



# Internet of Things:

## What If, We Deliver a 1% Improvement?

Industry	Segment	Type of Savings	Estimated Value Over 15 Years <small>(Billion nominal USD)</small>
Aviation	Commercial	1% fuel savings	\$30B
Power	Gas-fired Generation	1% fuel savings	\$66B
Healthcare	System-wide	1% Reduction in System Inefficiency	\$63B
Rail	Freight	1% Reduction in System Inefficiency	\$27B
Oil & Gas	Exploration & Development	1% Reduction in Capital Expenditures	\$90B
Total			<b>\$276B</b>

Source: "Industrial Internet: Pushing the Boundaries of Minds and Machines," GE, November 28, 2012



# IoT & Business Automation

“Everything that can be automated,  
will be automated.”

~ Robert Cannon



# **Automation**

Let machines do the  
hard work



“We are going to be completely  
unemployed as muscle-working  
machines”

~ Buckminster Fuller



# Machine Learning

## Anomaly detection



# Machine Learning

Event prediction





# Machine Learning

Context aware systems

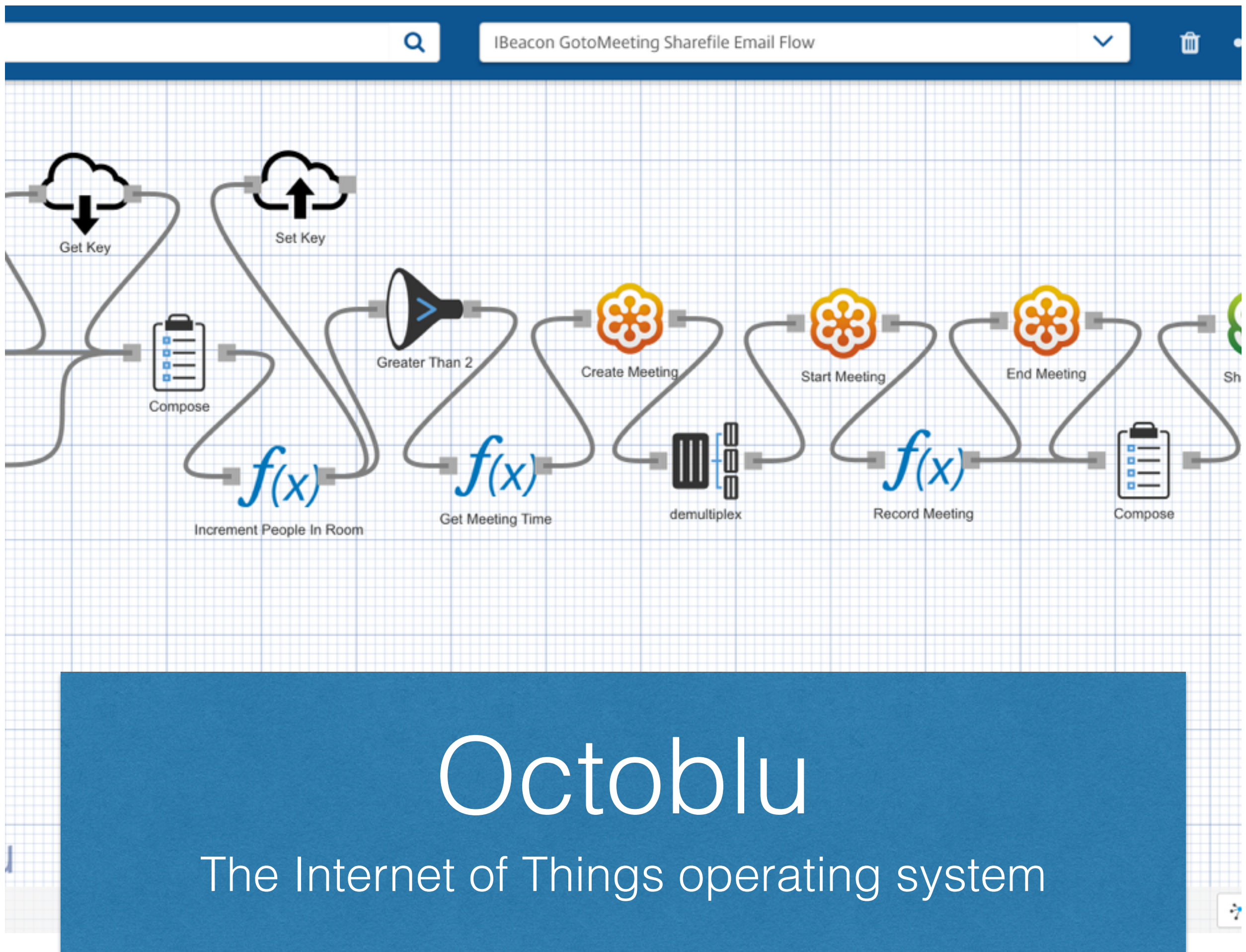


Where do humans fit in?



# Human Interaction

Humans have the power of personality and creativity, automate the rest.







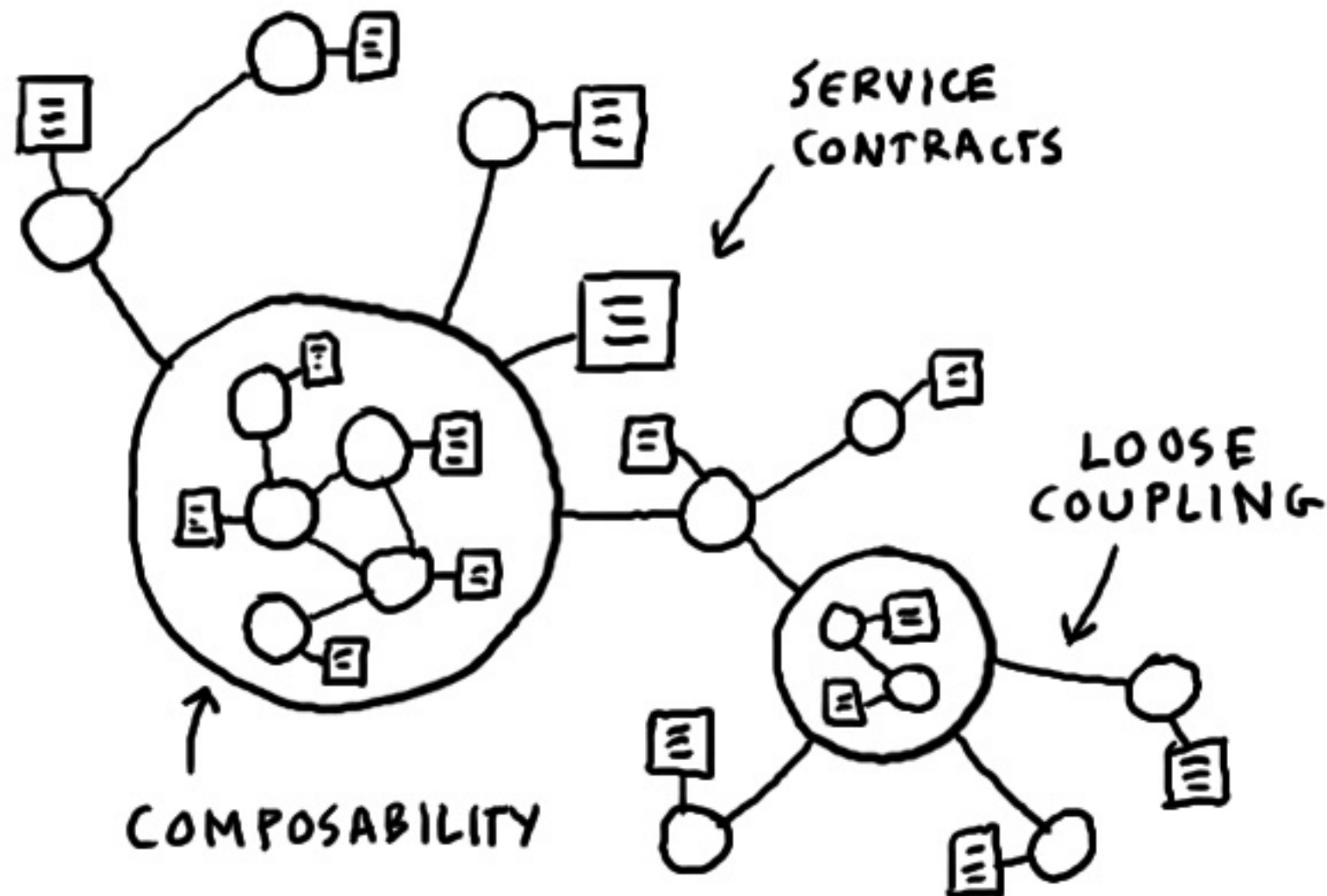
Talking to devices is hard, we make it easy

How to IoT

Be Lazy



## SERVICE ORIENTATION



# Microservices

Complex applications written in small independent programs

Machines cost far less  
than humans



Make the world a  
better place



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Slide Deck available at  
<https://github.com/royvandewater/rise-of-the-machines-talk/>