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# RISE OF THE MACHINES

It's not killer robots, it's killer technology

Gavin McDougall  
Solution Architect  
Red Hat

"In the future there will only be **two kinds of jobs**, those **done by ARTIFICIAL INTELLIGENCE** and those **assisted by ARTIFICIAL INTELLIGENCE.**"

- Kurt Seifried, Red Hat Software Engineer



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# AI MARKETPLACE



# MACHINE INTELLIGENCE 3.0

## ENTERPRISE INTELLIGENCE

### VISUAL

Orbital Insight planet  
clarifai DEEP VISION  
cortica Igcian  
SPACE\_KNOW Capricity  
netra deepomatic

### AUDIO

Gridspace TalkIQ  
nexidia twilio  
CAPIO Expect Labs  
Clover Mobvoi  
Quirious.AI popUP archive

### SENSOR

PREDIX IoT MAANA  
Sentenai PLANET OS  
UPTAKE IMUBIT Preferred Networks  
thingworx KONUX Alluvium

### INTERNAL DATA

PRIMER IBM WATSON  
Cycorp Palantir ARIMO  
Alation Sapho Outlier  
Digital Reasoning

### MARKET

mattermark Quid  
DataFox PREMISE  
Bottlenose MOTIVA  
enigma CB INSIGHTS  
Tracxn predata

## ENTERPRISE FUNCTIONS

### CUSTOMER SUPPORT

DigitalGenius Kasisto  
ELOQUENT Wise.io  
ACTIONIQ zendesk  
Preact CLARABRIDGE

### SALES

collective[i] sense  
fuse|machines AVISO  
salesforce INSIDE SALES .COM clari  
Zensight

### MARKETING

MINTIGO Lattice RADIUS  
LiftIgniter [PERSADO]  
brightfunnel retention SCIENCE  
COGNICOR AIRPR msg.ai

### SECURITY

CYLANCE DARKTRACE  
ZIMPERIUM deepinstinct  
Sentinel DEMISTO  
graphistry drawbridge  
SignalSense AppZen

### RECRUITING

textio entelo  
Wade & Wendy hiQ  
unitive SpringRole  
GIGSTER HireVue

## AUTONOMOUS SYSTEMS

### GROUND NAVIGATION

drive.ai AWS AdasWorks  
ZOOX MOBILEYE  
UBER Google TESLA  
nuTonomy Auro Robotics

### AERIAL

SKYDIO SHIELD AI  
Airware DJI LILY  
DroneDeploy  
pilot.ai SKYCATCH

### INDUSTRIAL

JAYBRIDGE OSARO  
CLEARPATH fetch  
KINOREO  
HARVEST rethink robotics

### PERSONAL

amazon alexa  
Cortana Allo  
facebook  
Siri Replika

## AGENTS

### PROFESSIONAL

butter.ai pogo SKIPFLAG  
clara x.ai slack  
talla Zoom sudo

## INDUSTRIES

### AGRICULTURE

BLUE RIVER mavrx  
tule TRACE GENOMICS Pivot Bio  
TerraAvion AGRI-DATA  
Descartes Labs udio abundant

### EDUCATION

KNEWTON volley  
gradescope  
CTI coursera  
UDACITY alt school

### INVESTMENT

Bloomberg sentient  
iSENTIUM KENSHO  
alphaSense Dataminr  
CEREBELLUM CAPITAL Quandl

### LEGAL

blue J BEAGLE  
Everlaw RAVEL  
seal ROSS  
LEGAL ROBOT

### LOGISTICS

NAUTO Acerta  
PRETECKT  
Routific clearmetal  
MARBLE PITSTOP

## INDUSTRIES CONT'D

### MATERIALS

zymergen Citrine  
Eigen Innovations  
SIGHT MACHINE  
GINKGO BIOWORKS nanotronics  
CALCULARIO

### RETAIL FINANCE

TALA zest finance  
Lendo earnest  
affirm MIRADOR  
wealthfront Betterment

### PATIENT

PULSE CareSkore  
ZEPHYR HEALTH IBM Watson Health  
Oncora SENTRIAN  
Atomwise Numerate

### IMAGE

BUTTERFLY 3SCAN  
ARTERYS enlitic  
BAYLABS imagia  
Google DeepMind

### BIOLOGICAL

iCarbonX color GRAIL  
deep genomics RECURSION  
LUMINIST Numerate  
Atomwise verily WHOLE BIOME

## TECHNOLOGY STACK

### AGENT ENABLERS

OCTANE.AI howdy. Maluuba KITT.AI  
OpenAI Gym Kasisto AUTOMAT  
semanticmachines

### DATA SCIENCE

DOMINO SPARKBEYOND rapidminer  
kaggle DataRobot yhat AYASDI  
data iku seldon yseop bigml

### MACHINE LEARNING

CognitiveScale GoogleML context relevant  
Cycorp HyperScience nora logics minds.ai H2O.ai  
SCALED INFERENCE sparkcognition loop GEOMETRIC INTELLIGENCE  
deepsense.io reactive skymind bonsai

### NATURAL LANGUAGE

agolo #FYLIEN LEXALYTICS  
Narrative Science loop@ai spaCy LUMINOSO  
cortical.io MonkeyLearn

### DEVELOPMENT

SIGOPT HyperOpt fuzzyio okite  
rainforest lobe Anodot  
Signifai LAYER 6<sup>AI</sup> bonsai

### DATA CAPTURE

CrowdFlower diffbot CrowdAI import io  
Paxata DATASIFT amazon mechanical turk enigma  
WorkFusion DATALOGUE TRIFACTA parsehub

### OPEN SOURCE LIBRARIES

Keras Chainer CNTK TensorFlow Caffe  
H2O DEEPLARNING4J theano torch  
DSSTNE Scikit-learn AzureML neon  
MXNet DMTK Spark PaddlePaddle WEKA

### HARDWARE

KNUPATH TENSTORRENT Cirrascale  
NVIDIA intel nervana Movidius  
tensilica GoogleTPU 10<sup>26</sup> Labs Qualcomm  
Cerebras Isosemi

### RESEARCH

OpenAI nnaisense ELEMENT<sup>AI</sup> vicarious  
KNOGGIN Numenta Kimera Systems Cogital



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# RED HAT AND AI

# RED HAT JBOSS BPM SUITE

**DEVELOPMENT TOOLS**  
Red Hat JBoss Developer Studio

**MODELING TOOLS**  
Authoring, validation, simulation, testing, deployment

**REPOSITORY**  
*git*, version management

**BUSINESS RULES**  
Declarative, inference rule execution

**BUSINESS PROCESS**  
BPMN 2.0 modeling, automation

**COMPLEX EVENT PROCESSING**  
Temporal reasoning, sliding window

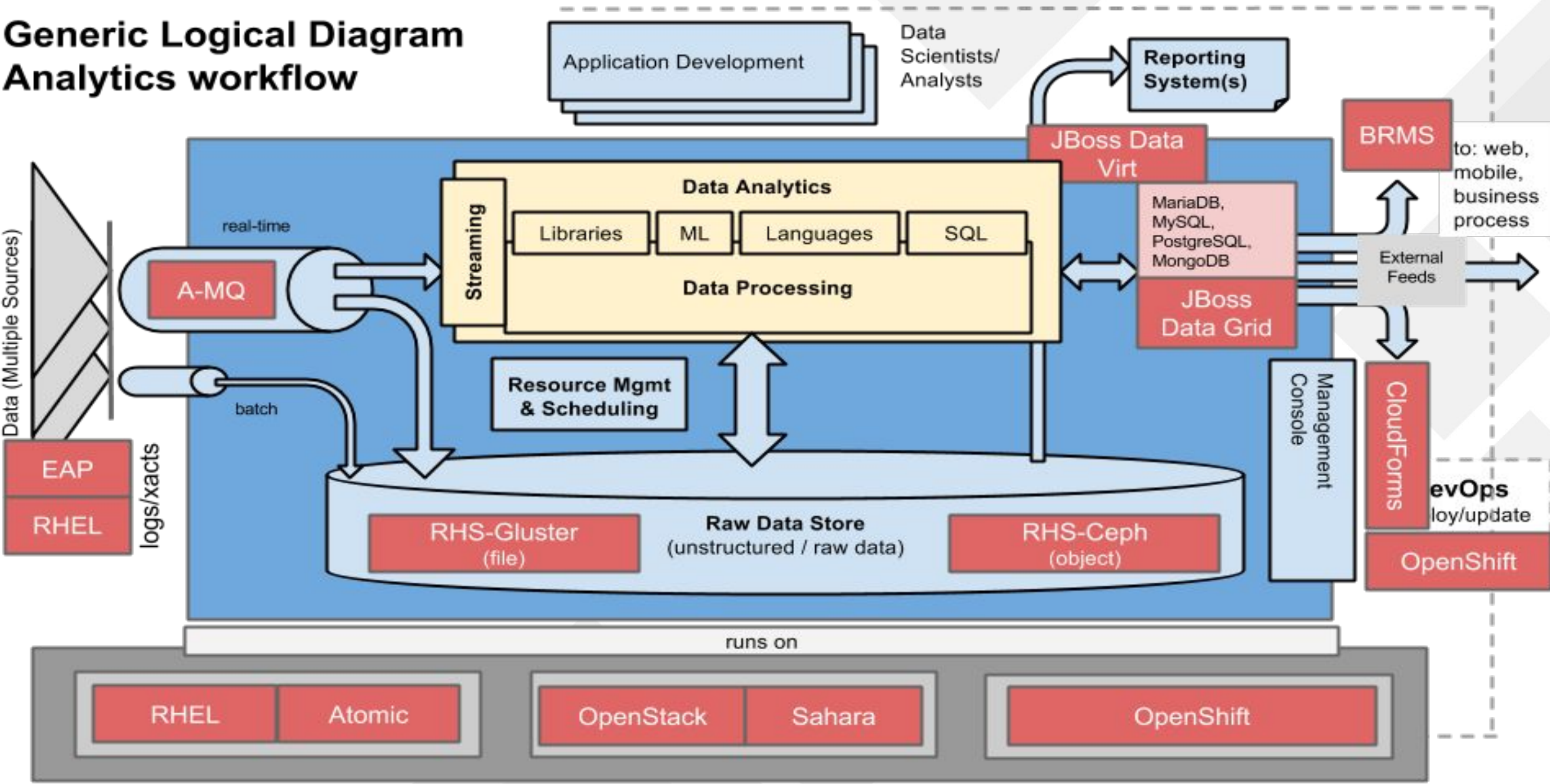
**MANAGEMENT TOOLS**  
Business activity monitoring, reporting

**CONTAINER**  
Stand alone JVM, web container, full EE container

JB0044



# Generic Logical Diagram Analytics workflow





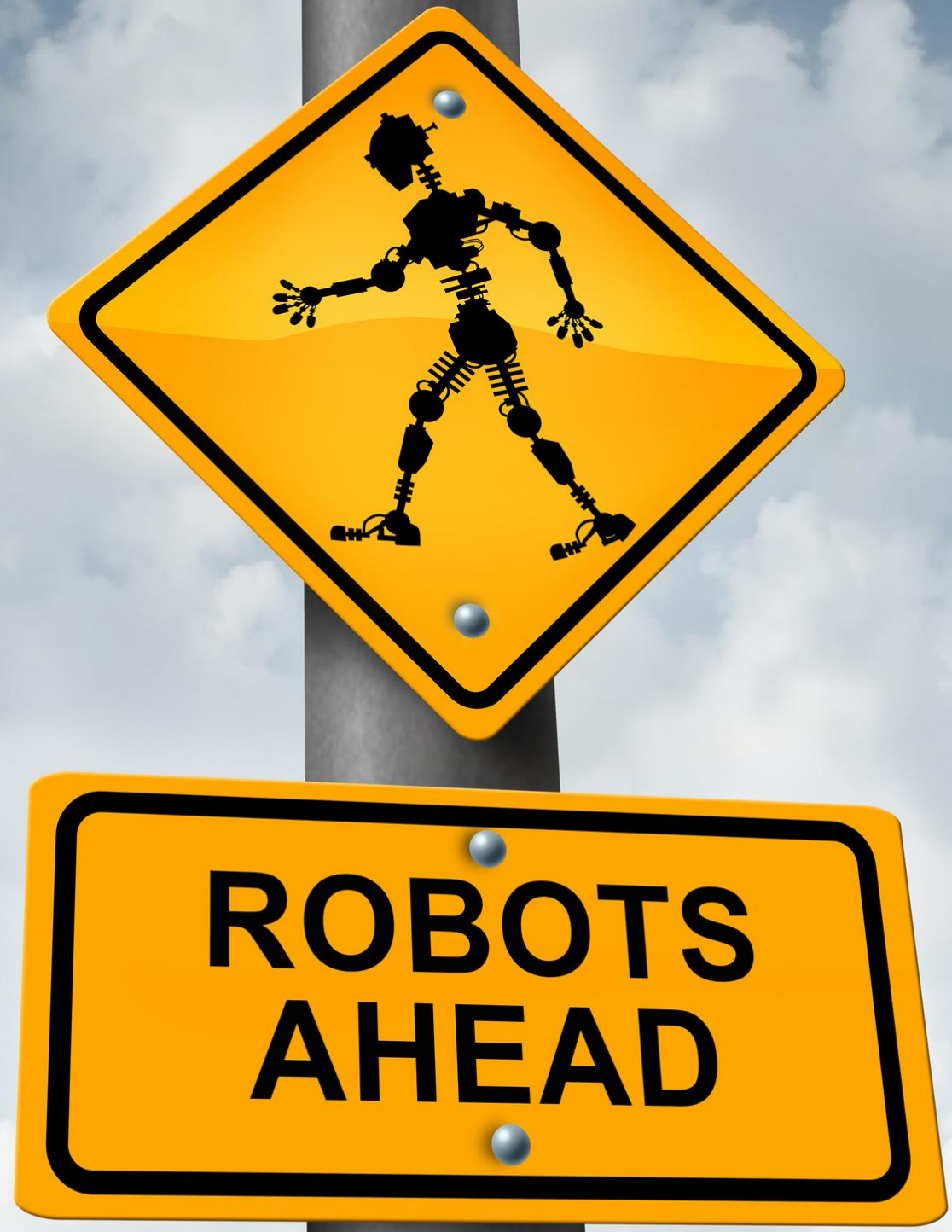
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# EXPERIMENT TIME





"Natural language processing has reached an important milestone. Sophisticated **CHATBOTS** are now available as white label and **OPEN SOURCE** offerings while larger technology companies are releasing Virtual Personal Assistants capable of performing complex tasks via voice commands, from ordering goods and services to acting as a smart hub for smart homes..."

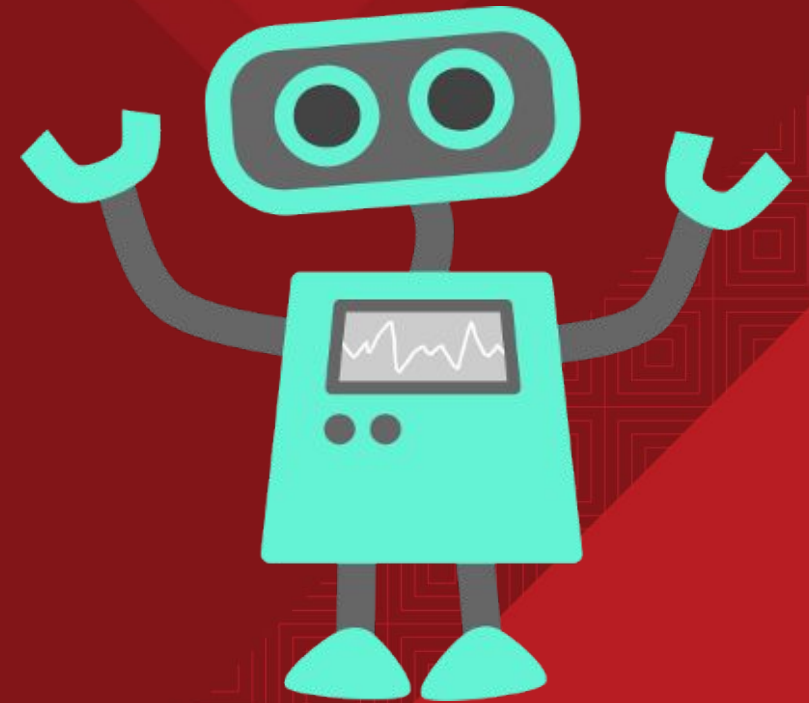
- Jessica Ekholm, Gartner @ **MWC 27 February 2017**



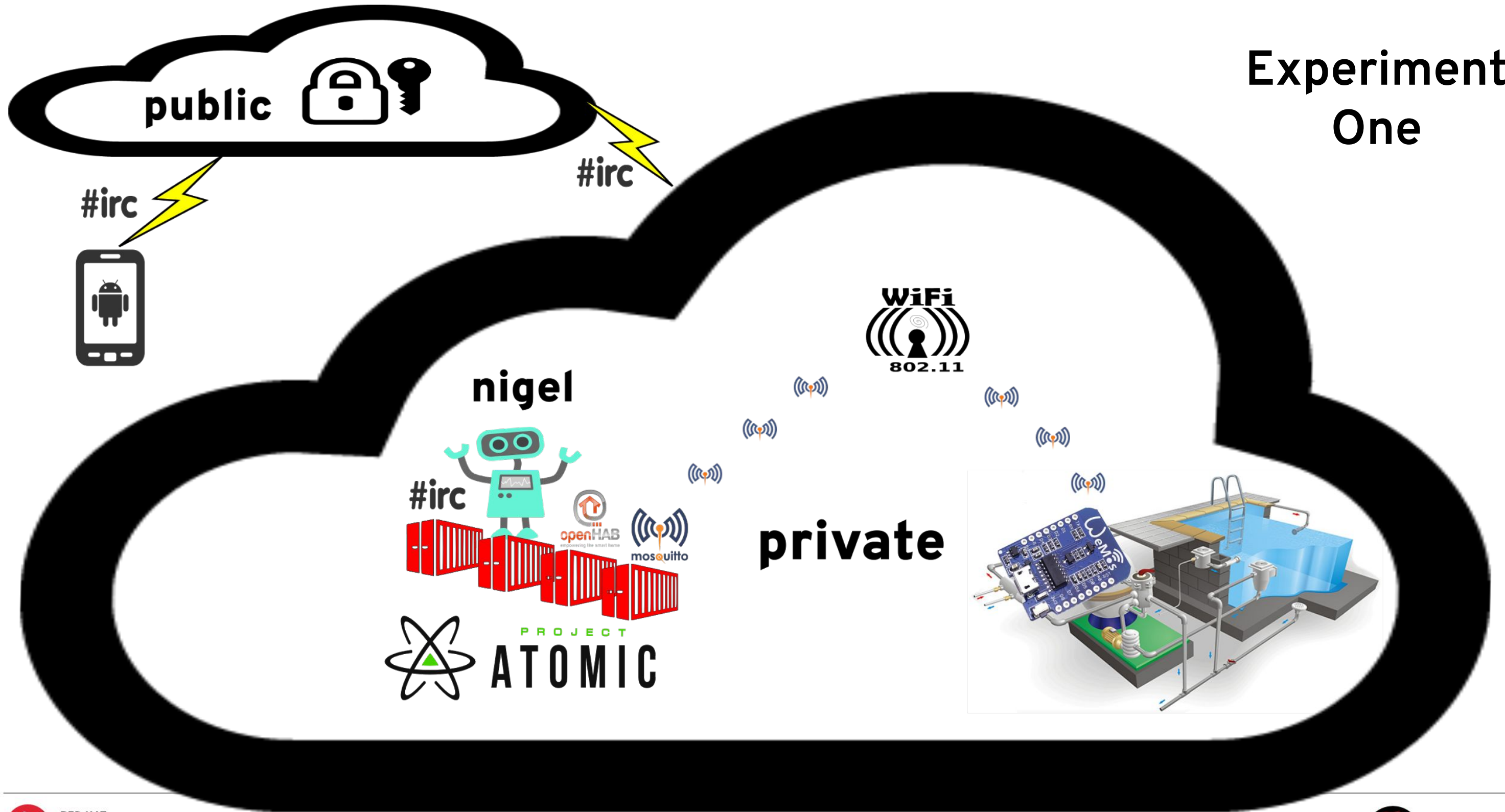
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# MEET NIGEL

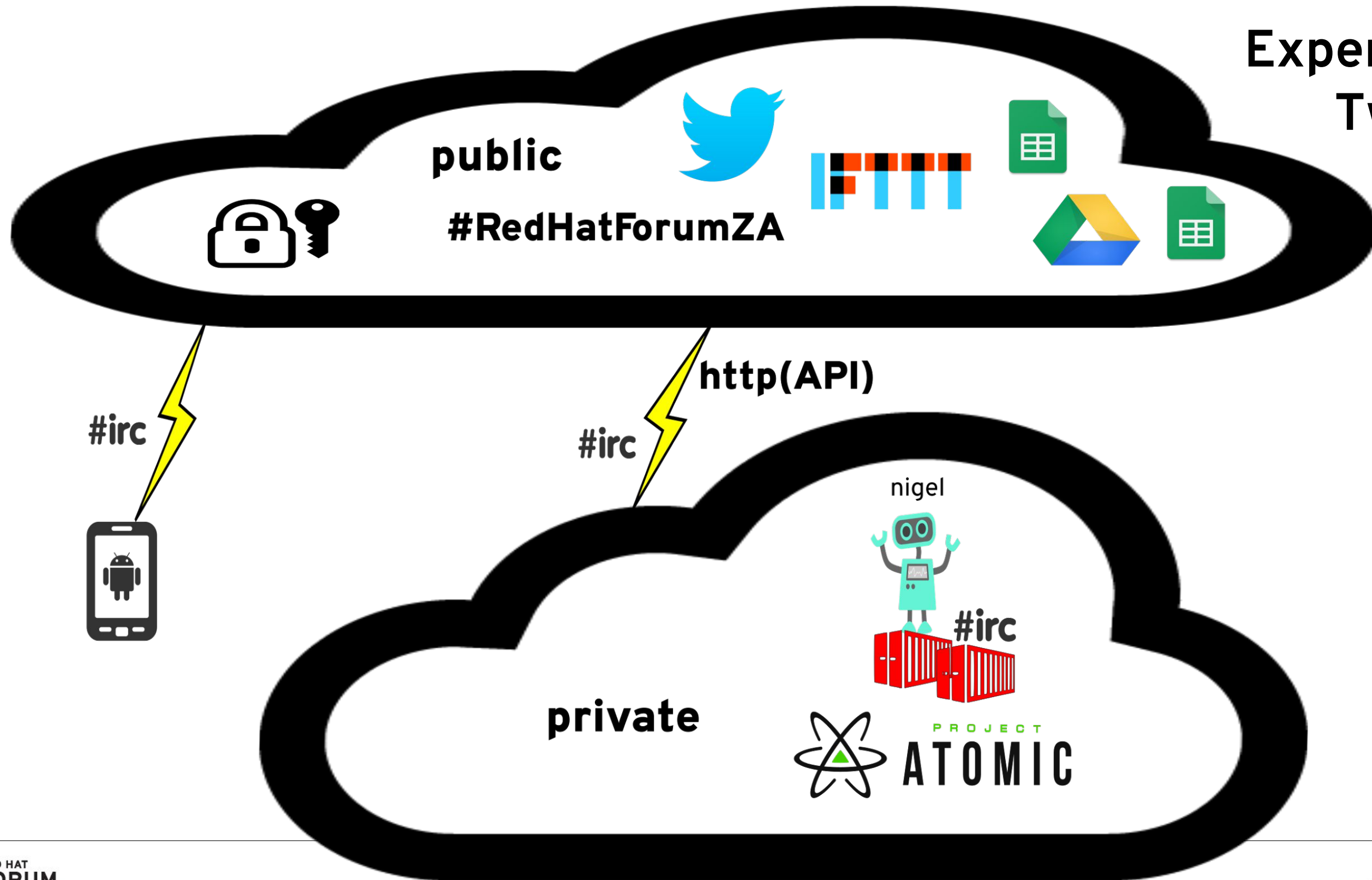


# Experiment One





# Experiment Two





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“As soon as it works, no one  
calls it AI any more” -

*John McCarthy*



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