



# L'IA / AI Mythes et réalités!

Forum Analytique SAS

29 novembre 2017



**sas**

OFFICIAL ANALYTICS PARTNER  
PARTENAIRE OFFICIEL D'ANALYTIQUE

**sas**



# Ordre du jour

- Les ingrédients de l'IA?
- Beaucoup de startups vous dites!
- Si on catégorisait les fonctions IA!
- Un cadre d'automatisation IA
- Quelles sont les attentes des entreprises envers l'IA?
- Comment SAS compte vous aider?

« In God we trust; all others must bring data » W. Edwards Deming



*« It's the science of training computers through data to perform tasks that typically require human intelligence to complete. »*

- Infonuagique
- Puissance de traitement
- Apprentissage machine & profond
- Données massives



# ISRAEL'S ARTIFICIAL INTELLIGENCE STARTUPS

\$3.2B

## TECHNOLOGIES \$310M

## SECTORS \$100M

<b>Image/Video Recognition</b> cortica, FACEPTION, anyVISION, eyeSight, audiburst, eyeSight, videocites, kmøeye, amplifica, IMAGRY	<b>Data Science &amp; Enablers</b> FIFTH DIMENSION, DMWAY, PARALLEL MACHINES, Brodmann, binah.ai	<b>Speech &amp; Text</b> CHATV PRO, BONOBOLAB, BEYONDVERBAL, Eva, wondervoice, Intuview, Digital Instinct	<b>Chatbots &amp; Assistants</b> Interact bot, Personify.ai, moed.ai, SnatchBot, PROBOT, CLIPCALL, servo.ai, Knowmail, Robinlabs, PACKAGE.AI, ONVGO	<b>Security &amp; Other</b> Brilliantior, SHIELDREN, Text Form, EMELAI, COMIGO, LifeBEAM, ANAGOG, Resonai, Talamoos, Magisto	<b>Shopping</b> Twiggie, supersmart, Syle, mmuze, SIGMENTO, findodo	<b>AgriTech</b> Cannatrik, PlanetWatchers, ATPlabs, flux, prospera, Phytech, WIVBE, RAYcatch	<b>Cleantech</b> ELENCOR, Grid4C, PICO, utorni, Futbol.ai	<b>Education/Legal/Sports</b> examPAL, LoxwGeex, Symbolab, CHAMPION, udobu, Sense, PhysioMax, PICO, Brand, utorni, Futbol.ai	<b>Social, Travel &amp; Other</b> SayZeal, WallSensor.com, OMGwhen, SeeVoov, SimpleAccess, ANMOOVE, P-PULSE, CAUSE MATCH, VECTORED Photonics
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## INDUSTRIAL \$113M

## AUTOMOTIVE \$35M

## ENTERPRISE \$1.1B

<b>Maintenance</b> Sansi, Presenso, 3DSignals, AUGURY	<b>Optimization</b> PLATAINE, Water.IO, CartaSense, PointGrab, IMUBIT, nJoin, COMMONSENSE	<b>Security &amp; Robotics</b> CyberX, APERIO, THETARAY, COGNITEAM, DLR, RoboLogics	<b>Other</b> axonize, WISE SHELF, WINDWARD, ClearVue, Correlor, HALO, PERCEPTO	<b>Autonomous</b> cognata, nexar, VAYAVISION, Marive, INNOVIZ	<b>Security</b> SAVERONE, SAFERIDE, C22 security, UPSTREAM, CARSPHERE	<b>Other</b> PARKILL, SONICLUE, ALTEGRA LABS, NOTRATIC, SafeCue, JUNGO	<b>Security</b> cybereason, TWISTLOCK, D.DAY LABS, BigID, SentinelOne, CyKick Labs	<b>Internal Data &amp; Intel</b> BRAND AI, Revuze, ENDOR, ESSENCE, ZIMPERIUM, JAVELIN, Intsignts, Voyager Labs, ANODOT	<b>Development &amp; IT</b> spotinst, codota, Clarisys, indeni, upsolver, applitools	<b>Support &amp; Other</b> OKKA, buddi, ACTIONBAR, platika, TechSee, walkme, repai, BOTique
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## HEALTHCARE \$240M

## FINTECH \$261M

<b>Imaging</b> aidoc, FDNA, zebra, DIACardio, RAD, VIZ	<b>Diagnostics</b> AcousticView, MAGENTIG, BIO EYE, diagnostics.ai, sight, GENOXX, TALIAZ	<b>Monitor</b> MyndYou, camerEyes, HEVIMONITOR, somatix, nanit, kytera, LIFEGRAPH, PERLIS, MEDASENSE	<b>Analytics &amp; Insights</b> BEACONCURE, treato, Healthica.ai, swatch, Medial, EarlySign, MedAware, INTENSIX, Kang Health, 2bPrecise	<b>Assistant</b> intuition robotics, emedgenia, VIDEO THERAPY, intake, ORCAM	<b>Discovery &amp; Other</b> scopio, PEPTICOM, CytoReason, PROFILLY, AUGmedics, Medorion	<b>Trading &amp; Investing</b> capitalise, ALGONELL, coSito, bondIT, Better Trader, AMENITY ANALYTICS, GALLO, BA, Finzor, SAMURAI	<b>Market &amp; Insights</b> Know, PAGAYA, compit, EARNIX, Propcy, See Eye, Kensee, GeoQuant, K.Y.C. Int	<b>Insurance &amp; Fraud</b> Atidot, riskified, simplex, REVENUESTREAM, Fraugster, Driveway, Lemonade	<b>Personal &amp; Other</b> BACKED, personetics, SELLER SNAP, change, VALA, FinCheck, TARYA, Feedvisor	<b>Sales &amp; HR</b> colabo, workkey, CHORUS, KANNITA, inflowz, GONG, PERCEPTIVE, PROSPECTOR, Joonko
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## MARKETING \$510M

<b>Advanced Targeting</b> BrightInfo, clickspree, Comprendi, DEEPR, viisights, TEXTLAB, WebyClip, PHRASETECH	<b>Predictive Analytics</b> MINTIGO, spree, AIMEE, optimove, PIXONEYE, Kilomstaro	<b>Analytics &amp; Insights</b> datorama, weebo, ASPECTIVA, SIGMENTAL, NeuroApplied, neowize, ubimo, VAULT, Brand-etal, OurCart	<b>Mobile Marketing</b> Valseer, GAME WHALES, TOMOBOX, Bigabid, YOU-APPI, TapReason, NUVIAD, spotted, MOBBQ	<b>Bidding</b> komoona, nRoll, outbid, NEEFLA, predictBid	<b>Platform</b> GAMMOSHI, METADATA, All Aspect, moonshot, Tropica, EXPOSEBOX, Tailor	<b>Content</b> KIDZ, articoolo, keywee, Taboola, crunchmind, Neural7, inboundli	<b>Customer Interaction</b> DYNAMIC YIELD, deepcha.ai, imperson, exceed, PLATICA	<b>Lead Generation &amp; Other</b> Brainster, ADEENS, SALAD, Adjust, PERSONATI, lead space, algoseller
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# 100 STARTUPS USING ARTIFICIAL INTELLIGENCE TO TRANSFORM INDUSTRIES

## CONVERSATIONAL AI/ BOTS



## VISION



## AUTO



## ROBOTICS



## CYBERSECURITY



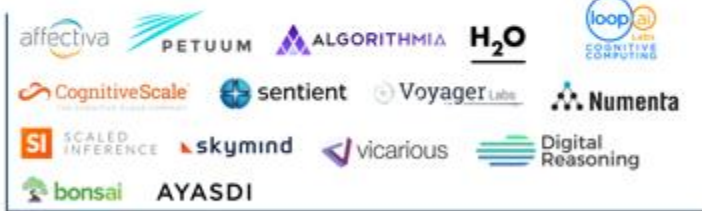
## BUSINESS INTELLIGENCE & ANALYTICS



## AD, SALES, CRM



## CORE AI



## HEALTHCARE



## TEXT ANALYSIS/ GENERATION



## IOT/IIOT



## COMMERCE



## FINTECH & INSURANCE



## OTHER





# L'étendu des startups en IA selon Harvard Business Review

## The State of Machine Intelligence, 2016

### ENTERPRISE INTELLIGENCE

#### AUDIO

Capio  
Clover Intelligence  
Expect Labs  
Gridspace\*  
Mobvoi  
Nexidia  
Pop Up Archive\*  
Quirious  
TalkIQ  
Twilio

#### INTERNAL DATA

Alation\*  
Arimo\*  
Cycorp  
Digital Reasoning  
IBM Watson Kyndi  
Outlier  
Palantir  
Primer  
Sapho\*

#### MARKET

Bottlenose  
CB Insights  
DataFox  
Enigma  
Mattermark  
Predata  
Premise  
Quid  
Tracxn

#### SENSOR

Alluvium  
Cj IoT  
GE Predix  
Imubit  
KONLUX  
Maana  
Planet OS  
Preferred Networks  
Sentenai  
ThingWorx  
Uptake

#### VISUAL

Algocian  
Captricity  
Clarifai  
Cortica  
Deepomatic  
DeepVision  
Netra  
Orbital Insight\*  
Planet  
Spaceknow

### ENTERPRISE FUNCTIONS

#### CUSTOMER SUPPORT

ActionIQ  
Clarabridge  
DigitalGenius\*  
Eloquent Labs  
Kasisto  
Preact  
Wise.io  
Zendesk

#### MARKETING

AirPR  
BrightFunnel\*  
CogniCor  
Lattice  
LiftIgniter  
Mintigo  
msg.ai  
Persado  
Radius  
Retention Science

#### RECRUITING

Entelo  
Gigster\*  
HIQ  
HireVue  
SpringRole  
Textio\*  
Unitive  
Wade & Wendy

#### SALES/FINANCE

6sense  
AppZen  
Aviso\*  
Clari  
Collective[1]  
Fusemachines  
InsideSales  
Salesforce  
Einstein  
Zensight\*

#### SECURITY

Cylance  
Darktrace  
Deep Instinct  
Demisto  
Drawbridge  
Networks\*  
Graphistry\*  
LeapYear  
SentinelOne  
SignalSense  
Zimperium

### AUTONOMOUS SYSTEMS

#### AERIAL

Airware  
DJI  
DroneDeploy  
Lily  
Pilot AI Labs  
Shield AI\*  
Skycatch  
Skydio

#### GROUND

AdasWorks  
Auro Robotics  
comma.ai  
Drive.ai  
Google  
Mobileye  
nuTonomy  
Tesla  
Uber  
Zoox

#### INDUSTRIAL

Clearpath Robotics  
Fetch Robotics  
Harvest Automation  
Jaybridge Robotics  
Kindred\*  
Osaro  
Rethink Robotics

### AGENTS

#### PERSONAL

Amazon Alexa  
Apple Siri  
Google Now/  
Allo  
Facebook M  
Microsoft  
Cortana  
Replika

#### PROFESSIONAL

Alien Labs  
Butter.ai  
Clara  
SkipFlag  
Slack  
Sudo  
Talla  
x.ai  
Zoom.ai

### INDUSTRIES

#### AGRICULTURE

Abundant Robotics  
AgriData  
Blue River Technology  
Descartes Labs  
Mavrx\*  
Pivot Bio  
TerrAvion  
Trace Genomics  
Tule\*  
UDIO

#### EDUCATION

AltSchool  
Content Technologies (CTI)  
Coursera  
Gradescope\*  
Knewton  
Volley

#### INVESTMENT FINANCE

AlphaSense  
Bloomberg  
Cerebellum Capital  
Dataminr  
iSentium  
Kensho  
Quandl  
Sentient

#### LEGAL

Beagle  
Blue J Legal  
Everlaw  
Legal Robot  
Ravel Law  
ROSS  
Intelligence  
Seal

#### MATERIALS/ MANUFACTURING

Calculario  
Citrine Informatics  
Eigen Innovations  
Ginkgo Bioworks  
Sight Machine  
Zymergen

#### RETAIL FINANCE

Affirm  
Betterment  
Earnest  
Lendo  
Mirador  
Tala (fka InVenture)  
Wealthfront  
ZestFinance

#### TRANSPORTATION/ LOGISTICS

Acerta  
ClearMetal  
Marble  
NAUTO  
PitStop  
Preteckt  
Routific

### HEALTH CARE

#### BIOLOGICAL DATA

Atomwise  
Color Genomics  
Deep Genomics\*  
Grail  
iCarbonX  
Luminist  
Numerate  
Recursion  
Pharmaceuticals  
Verily  
Whole Biome

#### PATIENT DATA

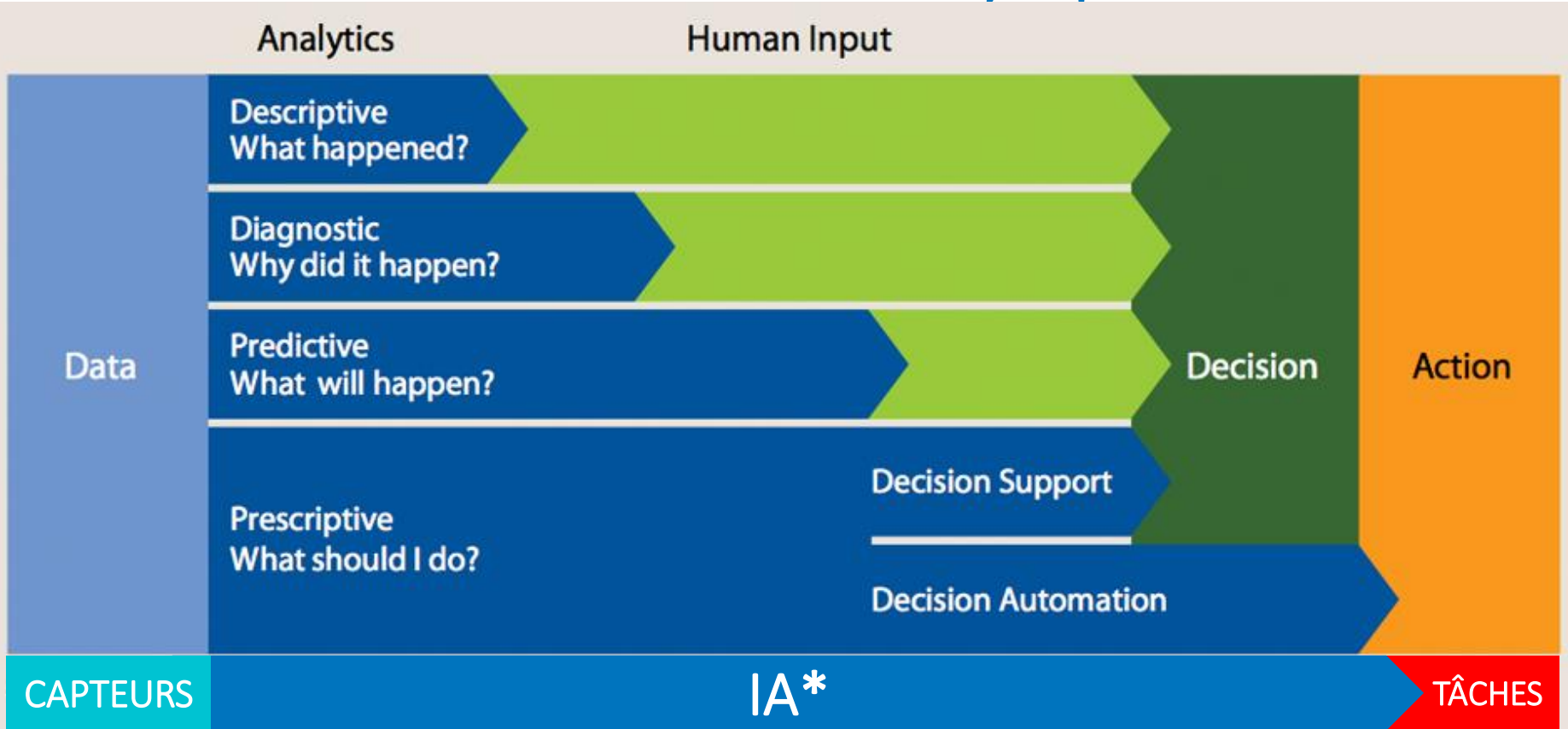
Atomwise  
CareSkore  
Deep6 Analytics  
IBM Watson Health  
Numerate  
Oncora Medical  
pulseData  
Sentrian  
Zephyr Health

#### IMAGE DATA

3Scan  
Arterys  
Bay Labs  
Butterfly Network  
Enlitic  
Google DeepMind  
Imagia

Gartner

# Le continuum analytique



\* Mon interprétation de la place de l'IA dans le continuum

Driverless cars

Diabetes prediction

Fighter drones

Credit card fraud detection

Cataract surgery

Long-term trading

Spam filtering

Short-term trading

Early education support

High-frequency trading

Online advertising

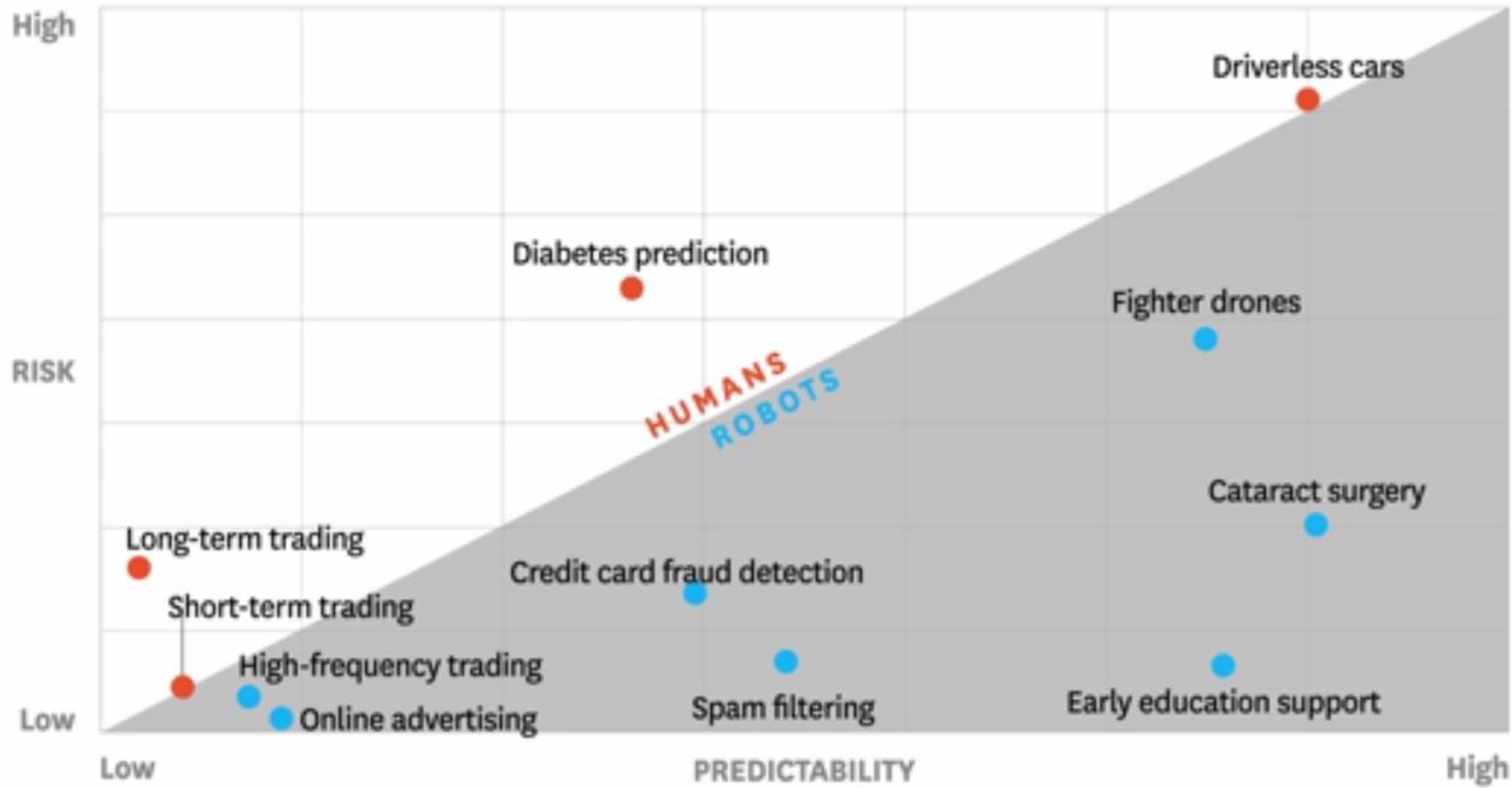


## THE TASKS MACHINES ARE TACKLING

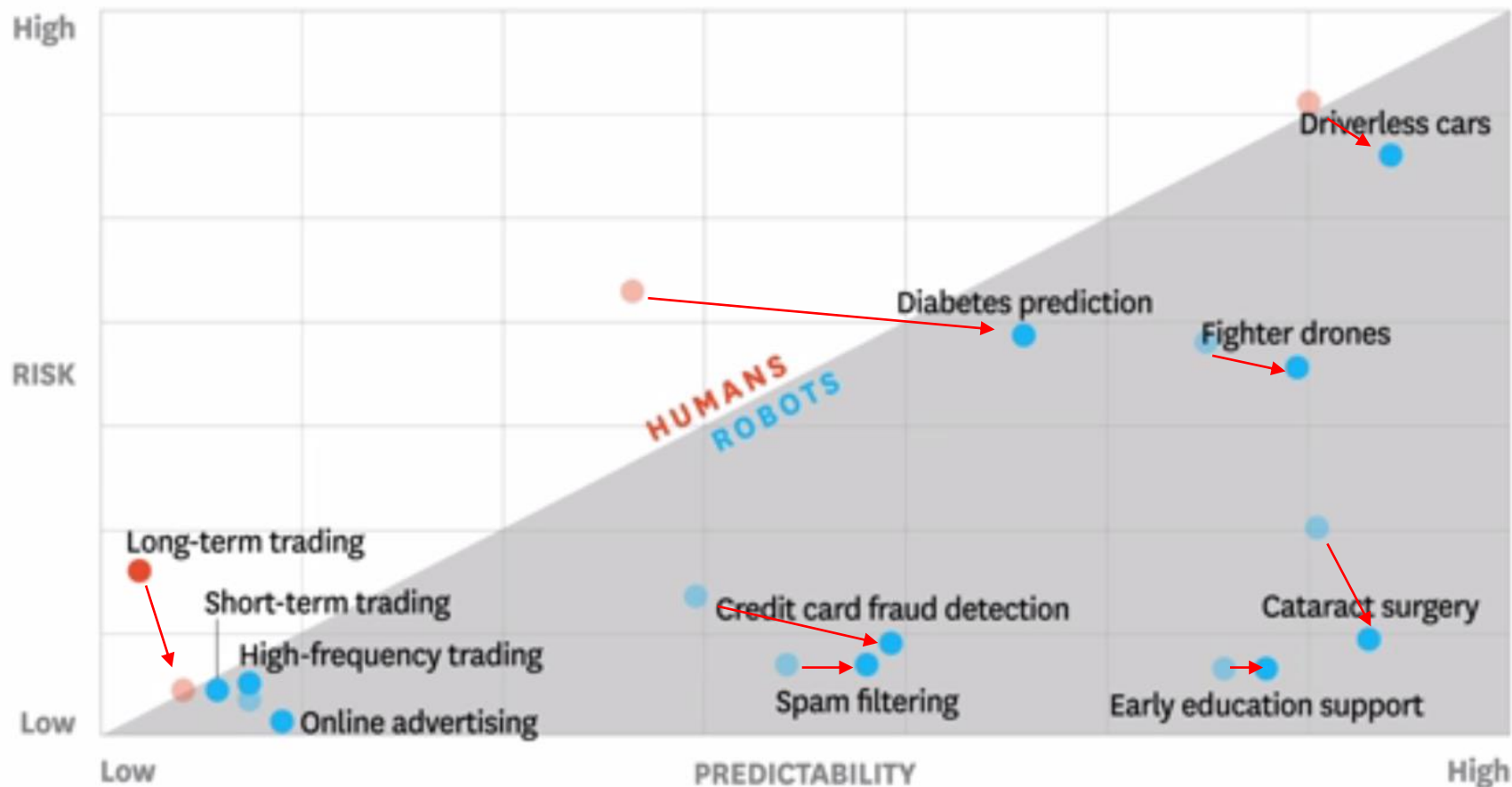


# THE DECISION AUTOMATION MAP

« Can you entrust that decision to a robot? », Vasant Dhar, Harvard Business Review, May 17, 2016 .



## THE DECISION AUTOMATION MAP OF THE FUTURE



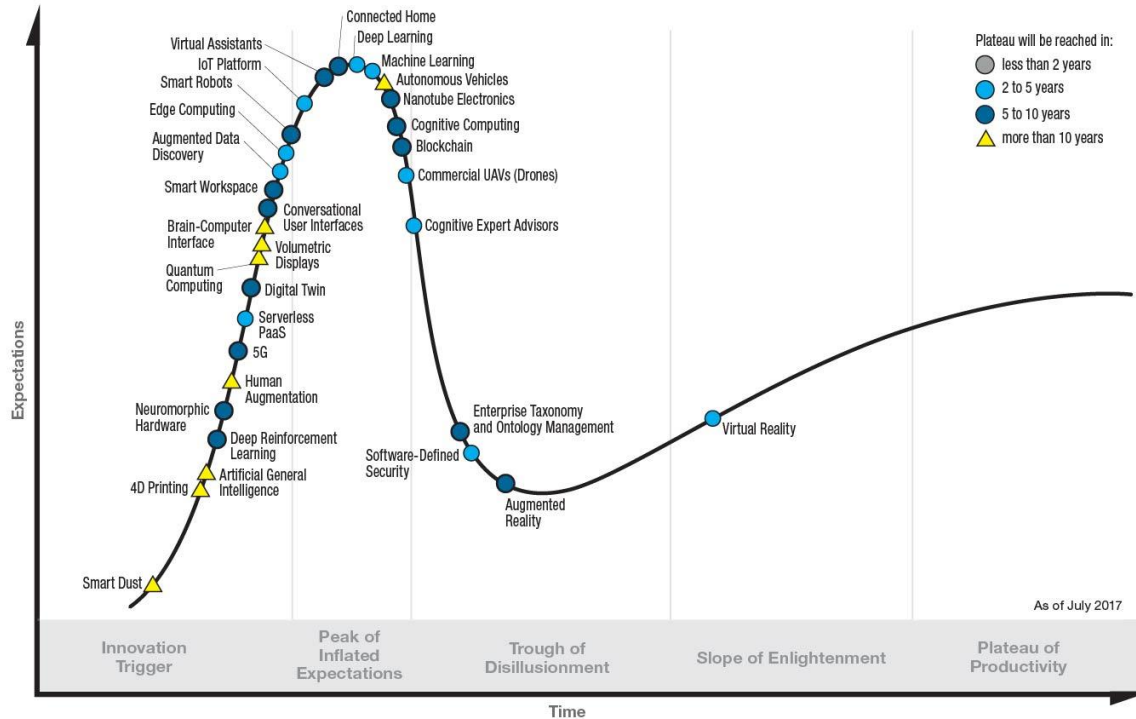


# THE DECISION AUTOMATION MAP OF THE FUTURE

« Can you entrust that decision to a robot? », Vasant Dhar, Harvard Business Review, May 17, 2016 .



# Gartner Hype Cycle for Emerging Technologies, 2017

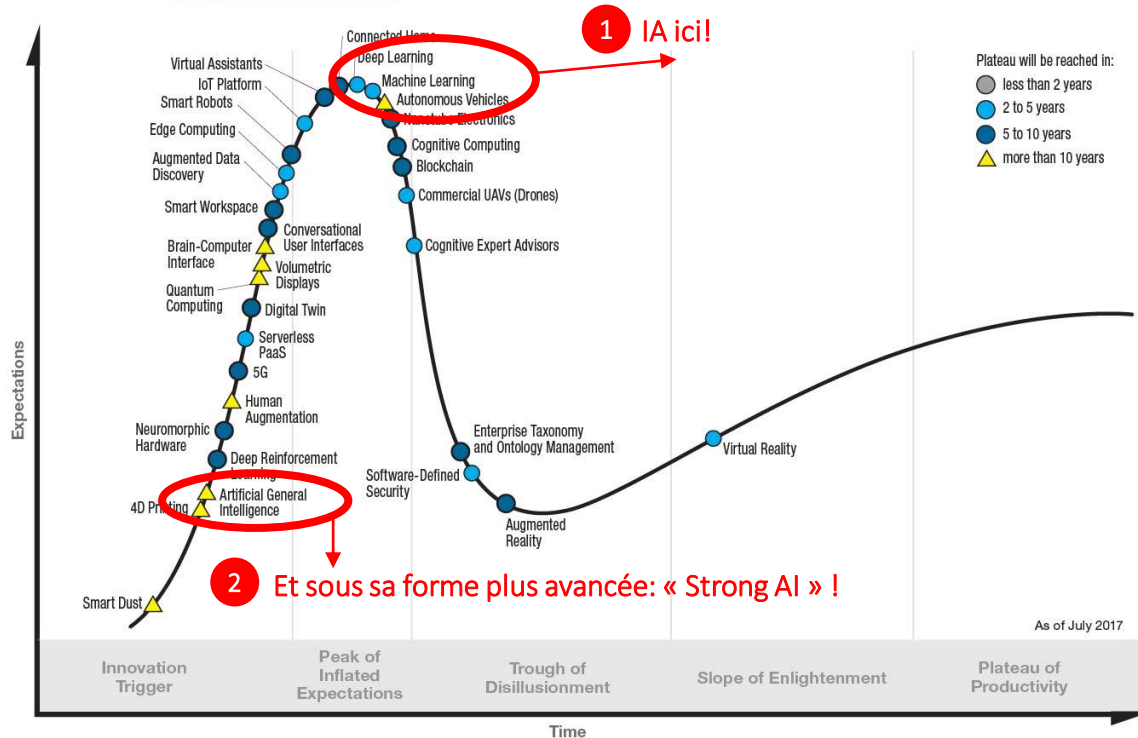


[gartner.com/SmarterWithGartner](https://gartner.com/SmarterWithGartner)

Source: Gartner (July 2017)  
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**Gartner**

# Gartner Hype Cycle for Emerging Technologies, 2017



[gartner.com/SmarterWithGartner](http://gartner.com/SmarterWithGartner)

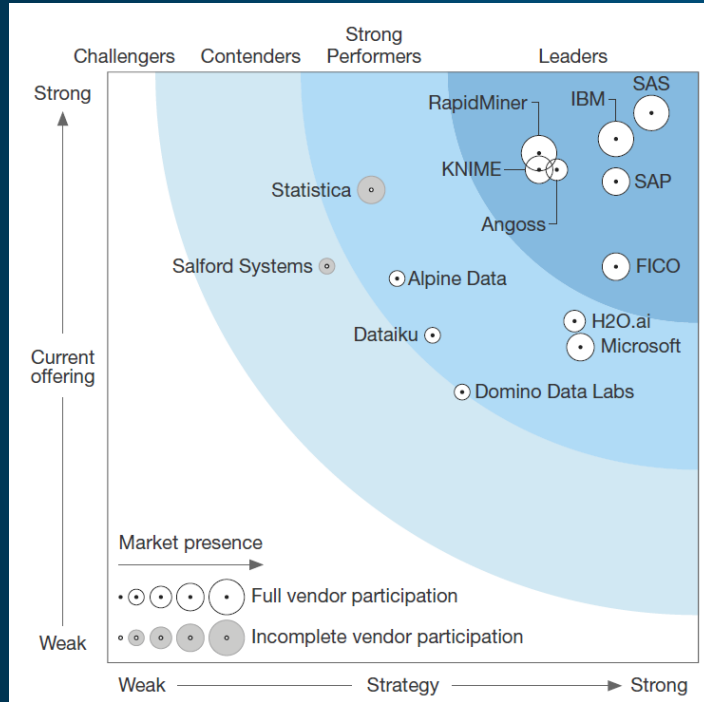
Source: Gartner (July 2017)  
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**Gartner**

**sas**



# SAS est le leader 1Q2017 selon Forrester Wave™: pour ses solutions d'analytique predictive et d'apprentissage machine



“SAS reimagines its data science portfolio”

“A key challenge is that SAS has a target on its back by the open source zealots that summarily and wrongly dismiss SAS as old school.”

**FORRESTER**

The Forrester Wave™: Predictive Analytics  
And Machine Learning Solutions, Q1 2017

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# Les essentiels de l'Apprentissage Machine et du Deep Learning...

Models:  
Ex: DNN,CNN&RNN



Data  
Volume & Quality



Computational  
Intensity



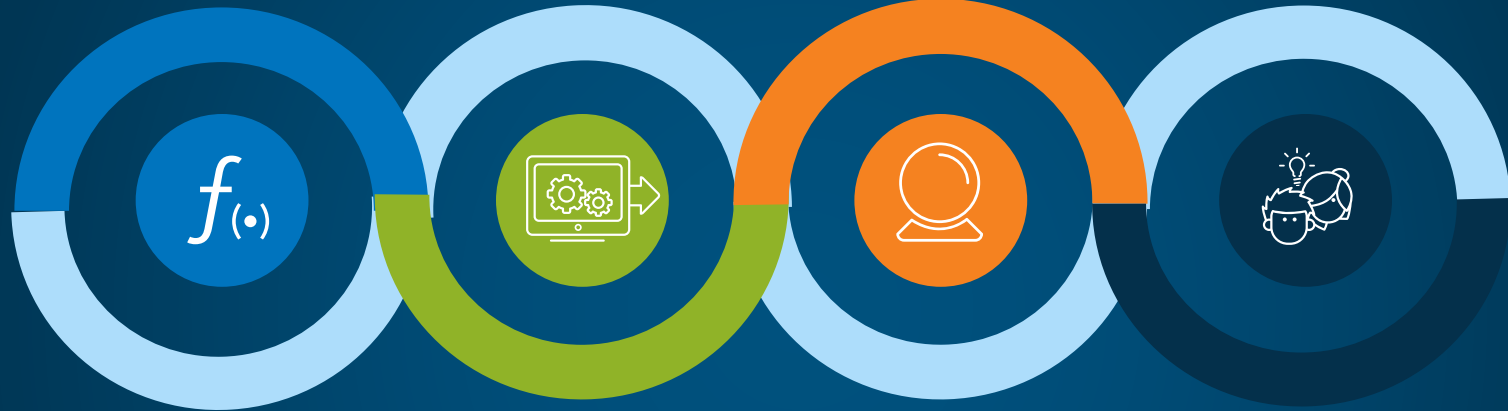
Data Scientist  
Skillset



Model  
Interpretability



# Quelles sont les attentes des organisations envers l'IA?



## Better Results

- Less assumptions
- Better math
- More data
- Traceable and interpretable

## Auto Magic

- Throw data at it
- **Automate** the process
- Remove Bias

## Lower Cost and Increase Revenue

- Machines do the work
- Provides a lift from current situation
- Business Benefits Responsiveness

## Human Interfaces

- Better UI: Zero Code
- Better interaction
- Add speech, text and images



# Quel est le rôle de SAS en IA?



Support our customers on the factors that will make them successful in AI: data, compute, skillset



Embed AI into our own solutions, making them more effective and enhancing user experience



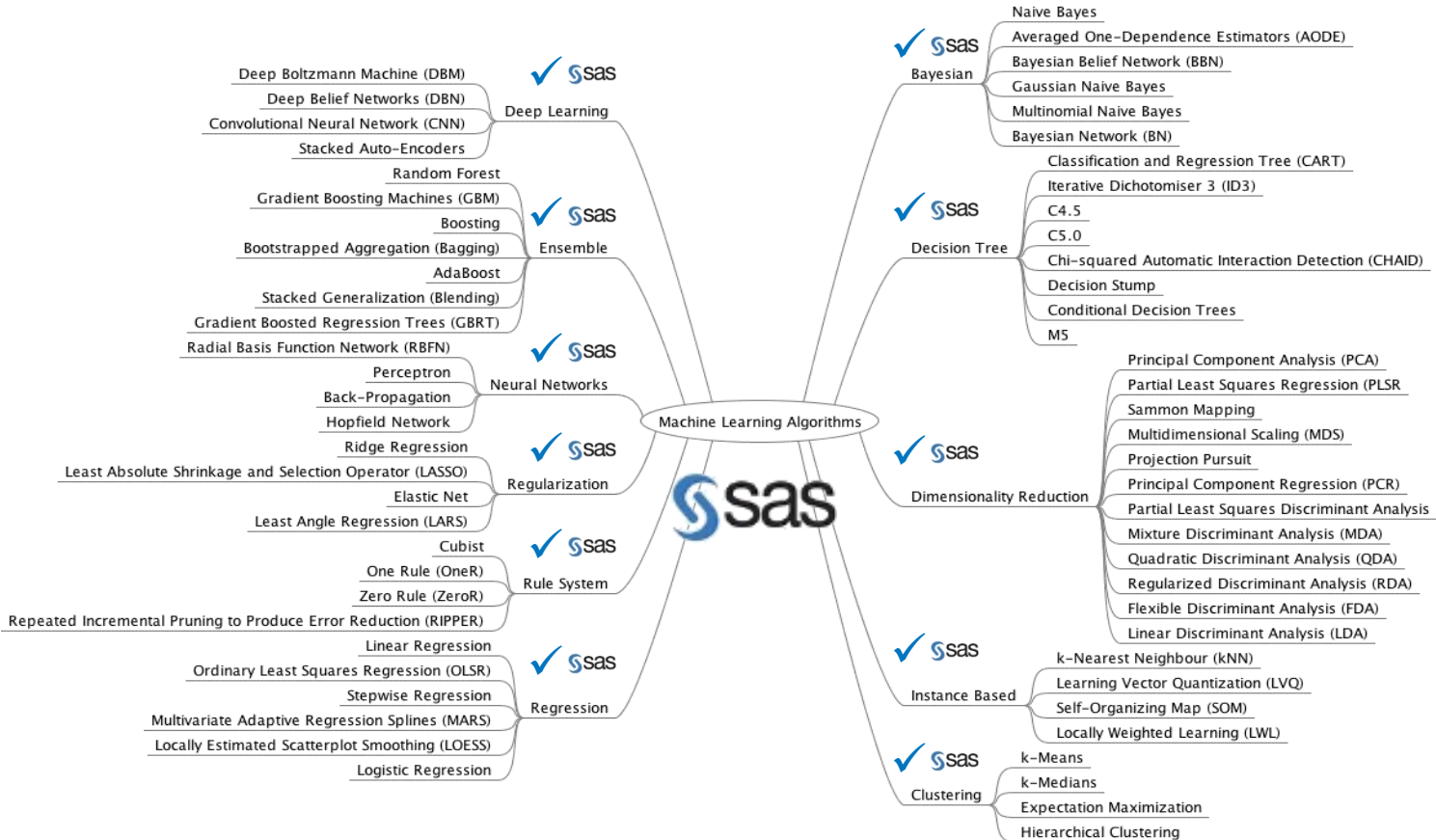
Provide our customers with extensible capabilities to help them meet their own AI goals

## Section 2: Marketing User Interaction

Voice interface to SAS data



# Algorithmes d'apprentissage profond et d'apprentissage machine





«We noticed a couple of years ago, that we were not getting enough statistical lift from our traditional credit scoring methodology.»

Peter Maynard, Senior Vice President of Global Analytics at Equifax



## Challenge

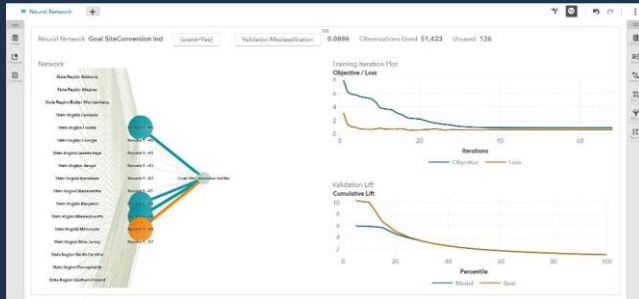
- Modern machine-learning approaches such as **deep neural networks**, promised more accurate results but...
- They were not interpretable and are considered a «**black box**»

## Solution

- «We developed a mathematical proof that shows that we could generate a neural net solution that can be **completely interpretable for regulatory purposes.** »

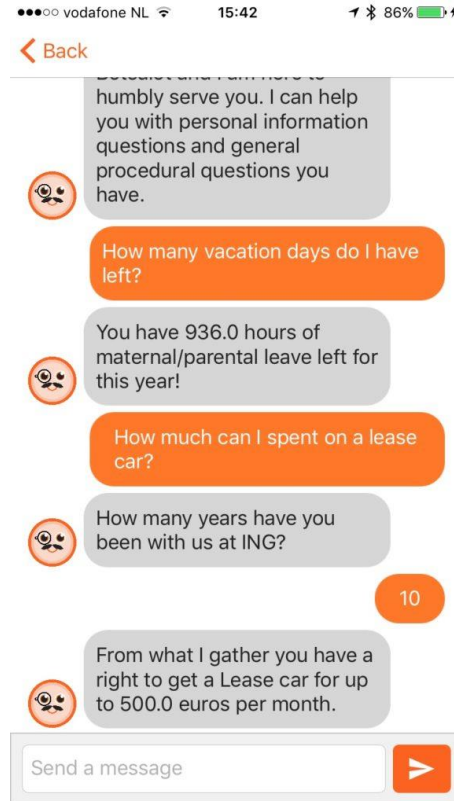
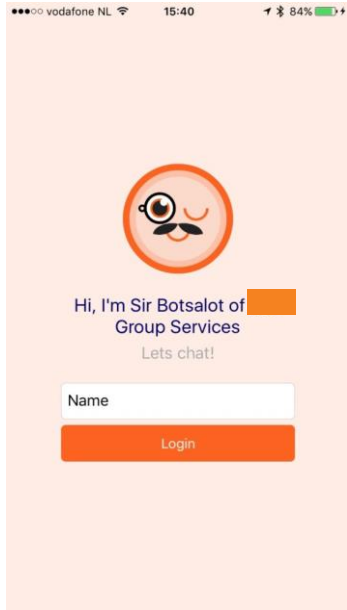
## Benefits

- Modern machine learning tools provide **greater access to credit.**
- Analyzing two years' worth of U.S. mortgage data, Equifax determined that numerous declined loans could have been loaned safely.
- **Increasing access to credit via approved mortgages.**
- Peter Maynard reports that the **neural net** has improved the **predictive ability of the model by up to 15%.**



# IA en Action

## Application Chatbot pour les ressources humaines



### Example AI application powered by SAS

Here's what the application did:

- We collect the input from the chat as text.
- Extracted the text into its components.
- Predicted the question using these text entities and Machine Learning.
- Delivered an automated response back to user.

Source: SAS FSS Solution, July 2017



Hi, I'm Sir Botsalot

Nathan

.....

Lets chat!

< Back Lets chat!

Hello... How can I help you?

I had an accident

Is everybody safe?

Yes

Are you at the scene of the accident?

Yes

Are you impeding traffic?

No

Okay... let's start the claims

Yes

No

Send a message [attach] [camera] [send]

< Back Lets chat!

Are you at the scene of the accident?

Yes

Are you impeding traffic?

No

Okay... let's start the claims procedure.

Is somebody else involved in the accident?


Yes

Can you give the name and the license plate of the other party involved?

Bob 34-GUR-324

Send a message [attach] [camera] [send]

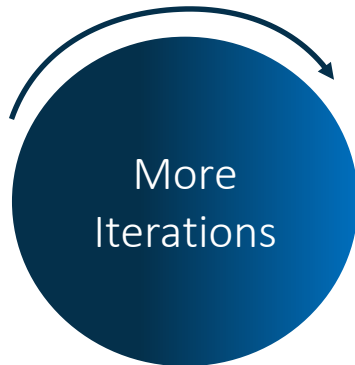
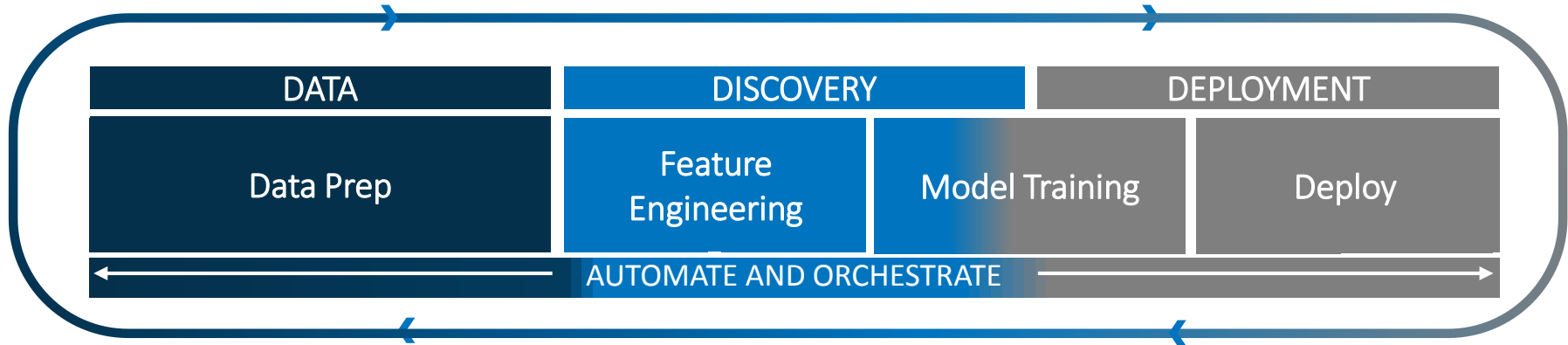
- Okay... let's start the claims procedure.
- Is somebody else involved in the accident?
  - No
- Are you driving the car with the following license plate number? HC61 IXJ
  - Yes
- Can you send a photo of the damage?
  - Yes
- Tap the symbols in the input field to select or make photo

- Can you send a photo of the damage?
  - Yes
- Tap the symbols in the input field to select or make photo
- 
- Can you still reach your destination?
  - Yes
  - No

- Uber Ride?(On the house)
  - Yes
- Please click on the button below to open the Uber App
  - [Request an Uber](#)
- We gathered all you information for this claim. Would you like to add any notes?
  - No
- Thank you for using our chat service. We will send you an email with all details about the claim.
- Have a nice day! 🙌

# Vous souvenez-vous du processus analytique?

## L'automatisation ajoute de la valeur





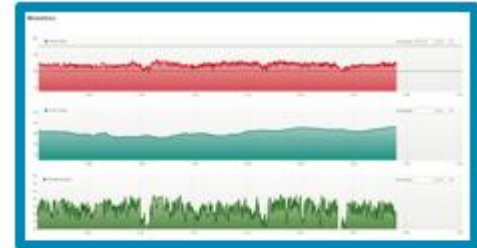
# Sport IoT Experiment Performance Improvement

SAS VDMML  
Viya 3.2

- Predict Fatigue and recovery and food intake pause time of a solo rider
- Forecast finishing time of the solo rider

FINAL TIME: 34 h 40 min 20 s

- Improved by 2h43min over last Silver State 508 with 2 295m more elevation
- Limit Power to around 200 Watts ~Aerobic Threshold
- Longer better rest after 6 hours of riding



# Fans, Family, Team and Participants CX

« Where is my teammate, friend, family member, preferred athlete and support vehicle ? »

Defi 808 Bonneville Geolocalisation des participants

Géolocaliser des participants !

ssas m-s timing

Defi 808 BONNEVILLE

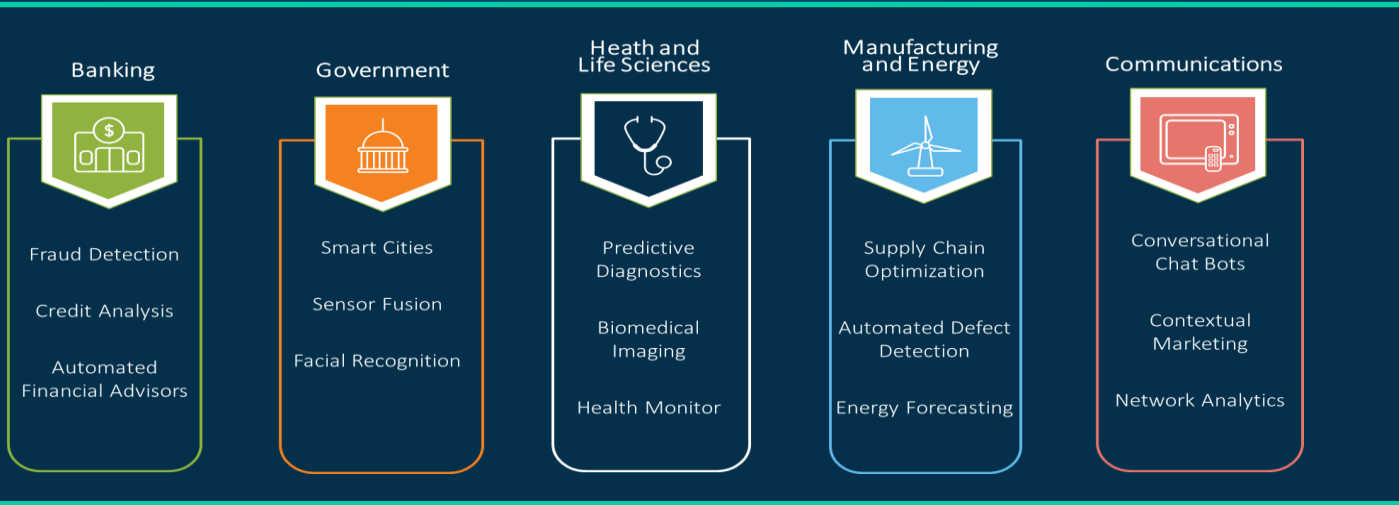
hotels

- Le Kandahar**  
160 Chemin du Curé-Deslauriers, Mont...
- Residence Inn**  
170 Chemin du Curé-Deslauriers, Mont...
- Starwood**  
100 Chemin de Kandahar, Mont-Trebl...
- Hôtel Quintessence**  
3004 Chemin de la Chapelle, Mont-Tre...
- Hilton**  
3035 Chemin de la Chapelle, Mont-Tre...

Nom	BIB	Equipe
Stephanie Rousseau	4263	Bonneville's Queens
Stephane Chaine	4030	Ss Lacasse
Station Tremblant	-	-
Station St-Donat	-	-
Station Arundel	-	-
Serge Gariepy	4211	Equipe Anik Armand
Rene Branchaud	4381	La Gang A Bob
Nick Ruscito-calssy	2130	Dream Team
Matthew Turcotte	2011	Powerwatts Quebec
Marilyn Charbonneau	2010	Powerwatts Quebec
Marie Sicotte	4223	Chicshack
Marc Samson	4373	Brad
Manuel Huger	44	-
Karyne Mortier	4262	Bonneville's Queens
Jean-pascal Lion	4360	Powerwatts Nord
Jarrett Jadicka	4566	Sas Vya
James Piccoli	34	-
James Mcnaughton	51	-
Helene Pilote-fortin	2610	Coupe D'or
Guillaume Tremblay Gaudin	4023	Powerwatts Desjard
Gilles Bouffard	4231	Fenplast 2
Francois Forget	4140	Vetements Ss Lacas
Evelyne Gagnon	40	Kronobar
Boursier A Venir	4200	Groupe Attis
Anik Armand	4210	Equipe Anik Armand
Amele Kretz (cascades)	2550	Amele Kretz (casca
Alexandra Piche	4403	Sportcom-tvgo

# L'approche SAS à l'IA

## Solutions IA



## App. ou Fonctions IA

Pattern Recognition • Prediction • Classification • Image Recognition • Motion Detection • Speech to Text • Cognitive Search: Recommendation Engines + Q&A System • Natural Language Interaction • Natural Language Generation • Sentiment Analysis

## BàOutils IA

Deep Learning  
Machine Learning

Natural Language Understanding  
Natural Language Processing



**«With all things being equal, the simplest explanation tends to be the right one.»**

**Guillaume d'Ockham**



OFFICIAL ANALYTICS PARTNER  
PARTENAIRE OFFICIEL D'ANALYTIQUE

# Merci!

Q & R ?

Questions ?

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Architecte principal de solutions

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<https://www.linkedin.com/in/jocelyngascongiroux>

Twitter: @JocelynGascon

Facebook: <https://www.facebook.com/jocelyn.gascongiroux>

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# Suite de l'étendu en IA selon le HBR

## MACHINE LEARNING TECHNOLOGY STACK

### AGENTS AND CONVERSATIONAL INTERFACES (AGENT ENABLERS)

Automat	Kasisto	OpenAI Gym
Facebook CommAI	KITT.AI	Semantic Machines
Howdy*	Maluuba	
	Octane AI	

### DATA SCIENCE

Ayasdi	Domino	Seldon
BigML	Data Lab*	SparkBeyond
Dataiku	Kaggle*	Yhat
DataRobot	RapidMiner	Yseop

### MACHINE LEARNING

Bonsai	deepsense.io	minds.ai
CognitiveScale	Geometric Intelligence	Nara Logics
Context Relevant*	HaO.ai	Reactive
Cycorp	HyperScience	Scaled Inference
Datacratic	Loop AI Labs	SkyMind
		SparkCognition

### NATURAL LANGUAGE

Agolo	Lexalytics	MonkeyLearn
AYLIEN	Loop AI Labs	Narrative Science
Cortical.io	Luminoso	spaCy

### DEVELOPMENT

AnOdor	Kite	SigOpt
Bonsai	Layer 6 AI	SignifiAI
Fuzzy.ai	Lobe.ai	
Hyperopt	Rainforest	

### DATA CAPTURE AND ENRICHMENT

Amazon Mechanical Turk	DataSift	Paxata
CrowdAI	Diffbot*	Trifacta
CrowdFlower	Enigma	WorkFusion
Datalogue	Import.io	

### OPEN SOURCE LIBRARIES

Amazon DSSTNE	DeepLearning4j	Nervana Neon
Apache Spark MLlib	H2O.ai	scikit-learn
Baidu	Keras	TensorFlow
PaddlePaddle	Microsoft Azure ML	Theano
Caffe	Microsoft CNTK	Torch7
Chainer	Microsoft DMTK	Weka
	MXNet	

### HARDWARE

1026 Labs	KNUPATH	Qualcomm
Cadence Tensilica	Intel (Nervana)	Tenstorrent
Cirrascale	Isocline	
Google TPU	NVIDIA DGX-1/Titan X	

### RESEARCH

Cogitai	NNAISENSE	Vicarious
Kimera	Numenta	
Knoggin	OpenAI	

# Fans, Family, Team and Participants CX

« Where is my teammate, friend, family member, preferred athlete and support vehicle ? »

Defi 808 Bonneville Geolocalisation des participants - Géolocalisation des participants

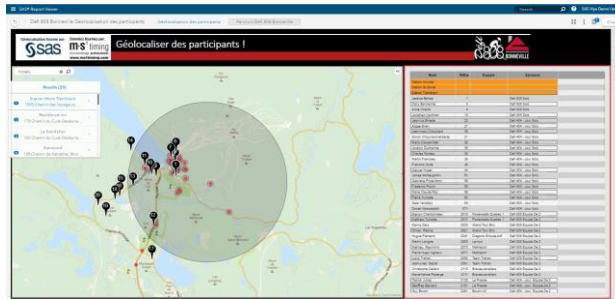
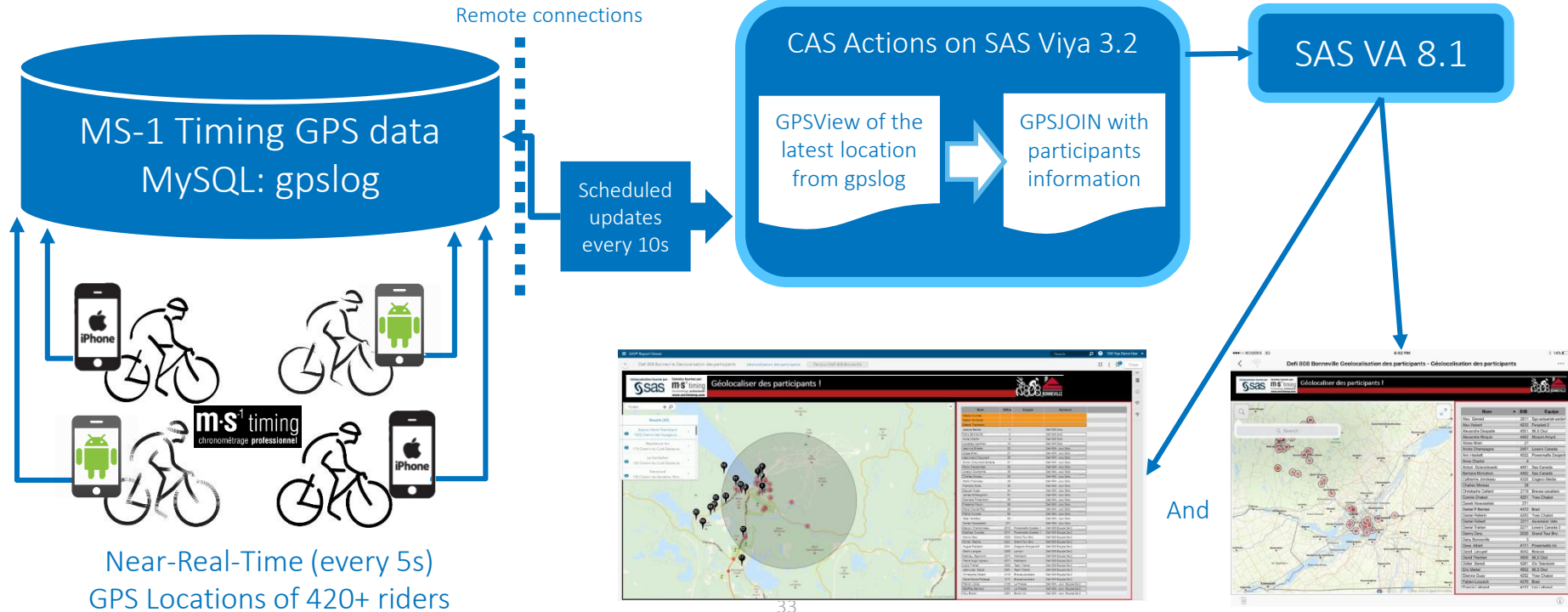
Géolocaliser des participants !

**Name**  
Le Kandahar

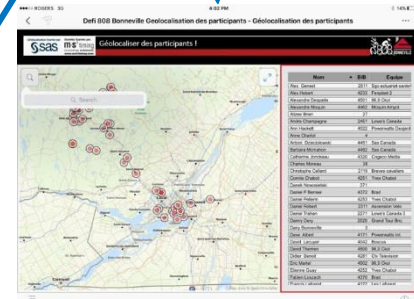
**Address**  
160 Chemin du Curé-Deslauriers, Mont-Tremblant, Quebec, J8E

Nom	BIB	Equipe
Stephanie Rousseau	4263	Bonneville's Queens
Stephane Chaine	4030	Ss Lacasse
Station Tremblant		
Station St-Donat		
Station Arundel		
Serge Gariepy	4211	Equipe Anik Armand
Rene Brancheud	4381	La Gang A Bob
Nick Ruscito-caissy	2130	Dream Team
Matthew Turcotte	2011	Powerwatts Quebec
Marilyn Charbonneau	2010	Powerwatts Quebec
Marie Sicotte	4223	Chicshack
Marc Samson	4373	Brad
Manuel Huger	44	
Karyne Mortier	4262	Bonneville's Queens
Jean-pascal Lion	4360	Powerwatts Nord
Jarrett Jadicka	4566	Sas Viya
James Piccoli	34	
James Monaghan	51	
Helene Pilote-fortin	2610	Coupe D'or
Guillaume Tremblay Gaudin	4023	Powerwatts Desjard
Gilles Bouffard	4231	Ferplast 2
Francois Forget	4140	Vetements Ss Lacas
Evelyne Gagnon	40	Kronobar
Boursier A Veniz	4200	Groupe Attis
Anik Armand	4210	Equipe Anik Armand
Amelie Kretz (cascades)	2550	Amelie Kretz (casca
Alexandra Piche	4403	Sportcom-Ivgo

# Fans and Participants CX Architecture Overview diagram



Web Responsive Design URL for web



SAS mobile application



Qui a dit que l'IA était difficile à interpréter?

