

GUEST TRACKING

SNOW LEVEL MONITORING

VIRTUAL TREASURE HUNT

INTERACTIVE CHAIRLIFTS

SMART SKI AREAS

BY SAMANTHA RUFO
NXTCONCEPTS



TRAFFIC CONGESTION TRACKING

SMART SKIS

SMART PATROL

ADAPTIVE LIGHTING

INTELLIGENT DINING

SMART ROADS

SMART PARKING

A.I. SALES

GPS LOCATOR - SMART PHONE DETECTION



ELON MUSK

"What we take for granted today - to talk to people over long distances, to transmit images, flying, accessing vast amounts of data like an oracle. These are all things that would have been considered magic a hundred years ago."

B I O

SAMANTHA RUFO

President, nxtConcepts, Ltd

20+ Years Interactive Marketing & Web

**VISIONARY, STORYTELLER, INTUITIVE,
DEMANDING, FUN, PASSIONATE,
CURIOUS, TECH GEEK, HOSTESS,
SKIER, LOVER OF SCOTCH**

SMART SKI AREAS

THE AGENDA FOR TODAY



1

AI IS NOT COMING.
IT'S ALREADY HERE.



2

HOW AI SAVVY ARE
YOU?
QUIZ



3

A CLOSER LOOK AT
REAL LIFE
EXAMPLES: SKI
AREAS & SKI
INDUSTRY



4

LIVING WITH AND
FLOURISHING IN AN
AI WORLD.

AI IS NOT COMING. IT'S ALREADY HERE.



AI AND IOT

QUIZ

What Consumers Really Think About AI: A Global Study

Insights into the minds of consumers to
help businesses reshape their customer
engagement strategies



Q U I Z

Q1.

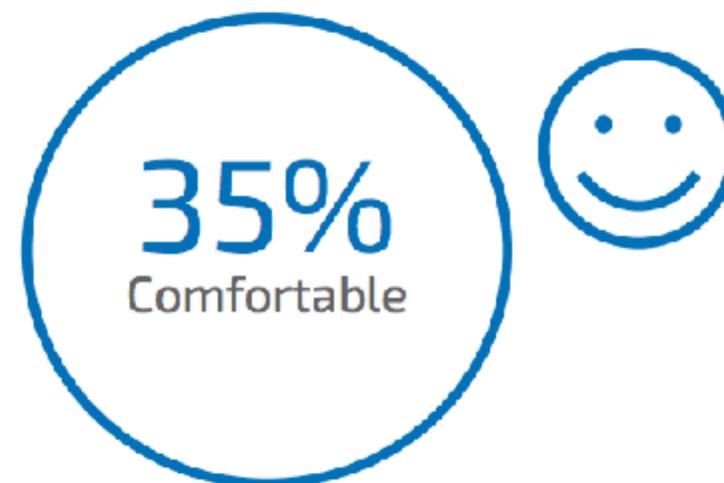
1. How comfortable are you/would you be with a business using Artificial Intelligence to interact with you?

A1. COMFORTABLE

A2. UNCOMFORTABLE

A3. NEITHER

How comfortable are you/would you be with a business using Artificial Intelligence to interact with you?



Q U I Z

Q2.

1. Which of the following scares you most about the use of AI in society?

A1. WON'T KNOW ME AS WELL AS A HUMAN

A2. RISE OF ROBOTS & ENSLAVEMENT OF HUMANITY

A3. FINDING I DO BETTER WITH AI THAN WITH FAMILY OR FRIENDS

A4. ROBOTS UNCOVERING MY DEEPEST SECRETS

A5. NONE OF ABOVE OR NOTHING

Which of the following scares you most about the use of AI in society?

33%

"Its never going to know me and my preferences as well as a human being"

24%

"The rise of the robots and enslavement of humanity"

10%

"Finding that I get on better with AI than I do with my friends and family"

5%

"Robots uncovering my deepest secrets"

28%

"None of the above/nothing"

Q U I Z

Q3.

1. Have you ever interacted with Artificial Intelligence technology?

A1. YES

A2. NO

A3. NOT SURE

Have you ever interacted with Artificial Intelligence technology?



Percentage of consumers who use AI based on the devices/ services they said they actually use



*See right hand chart for usage cases

Q U I Z

Q4.

1. Which of the following TECHNOLOGIES HAVE YOU USED OR ENCOUNTERED IN THE LAST YEAR?

- EMAIL SPAM FILTERS
- PREDICTIVE SEARCH TERMS
- SIRI VIRTUAL ASSISTANT
- ONLINE VIRTUAL ASSISTANT
- FACEBOOK RECOMMENDED NEWS
- ONLINE SHOPPING RECOMMENDATIONS
- HOME VIRTUAL ASSISTANT
- IMAGE SEARCHING
- NONE OF ABOVE

Which of the following technologies have you used or encountered in the last year?*

Check all that apply

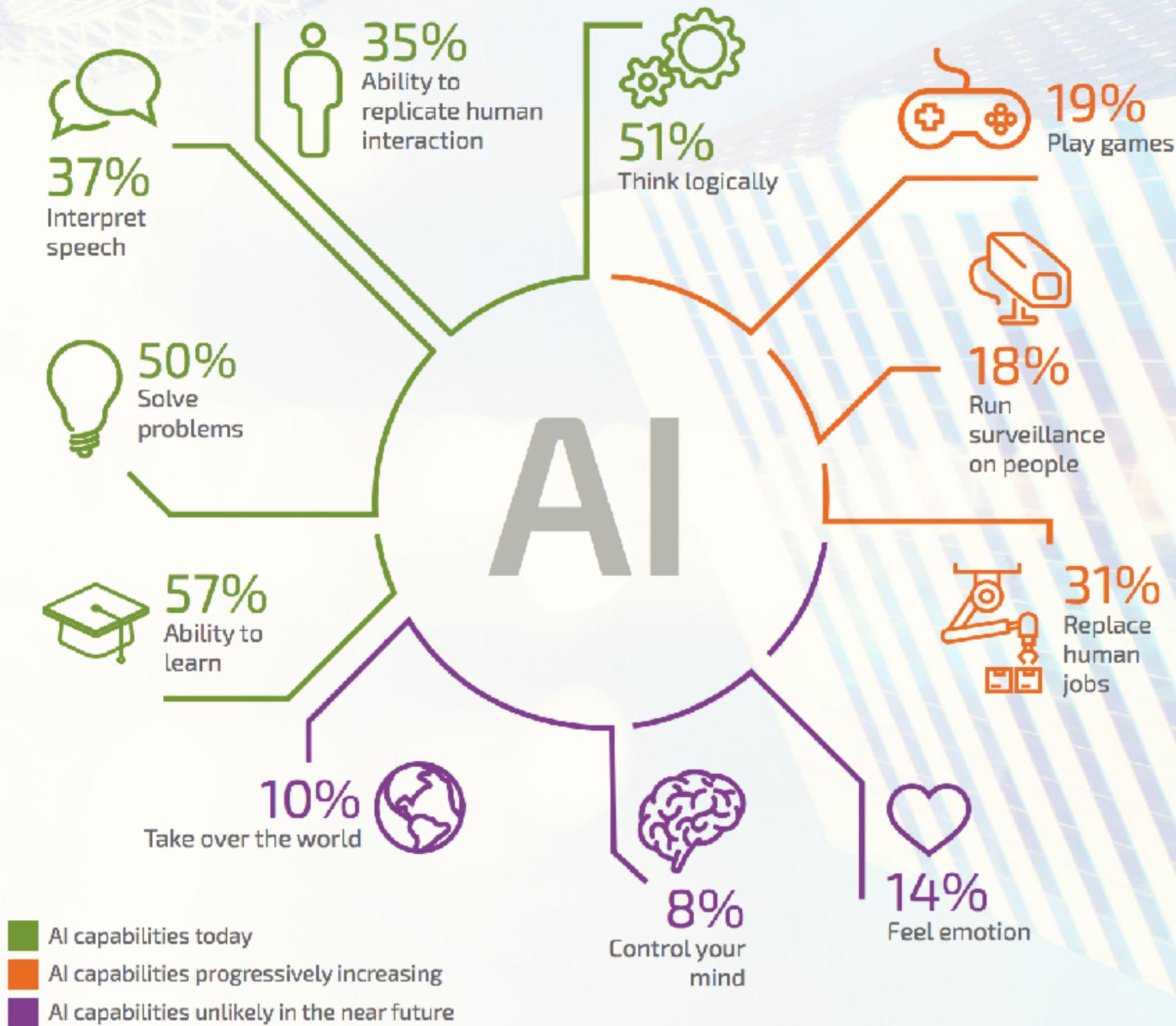


*All use a form of AI

Do you understand what Artificial Intelligence is?

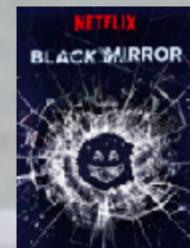


How do you describe what AI can do? *Check all that apply*



AI AND IOT

A CLOSER LOOK



The IoT promises to make our environment -- our homes and offices and vehicles -- smarter, more measurable, and chattier.



AI (Artificial Intelligence)

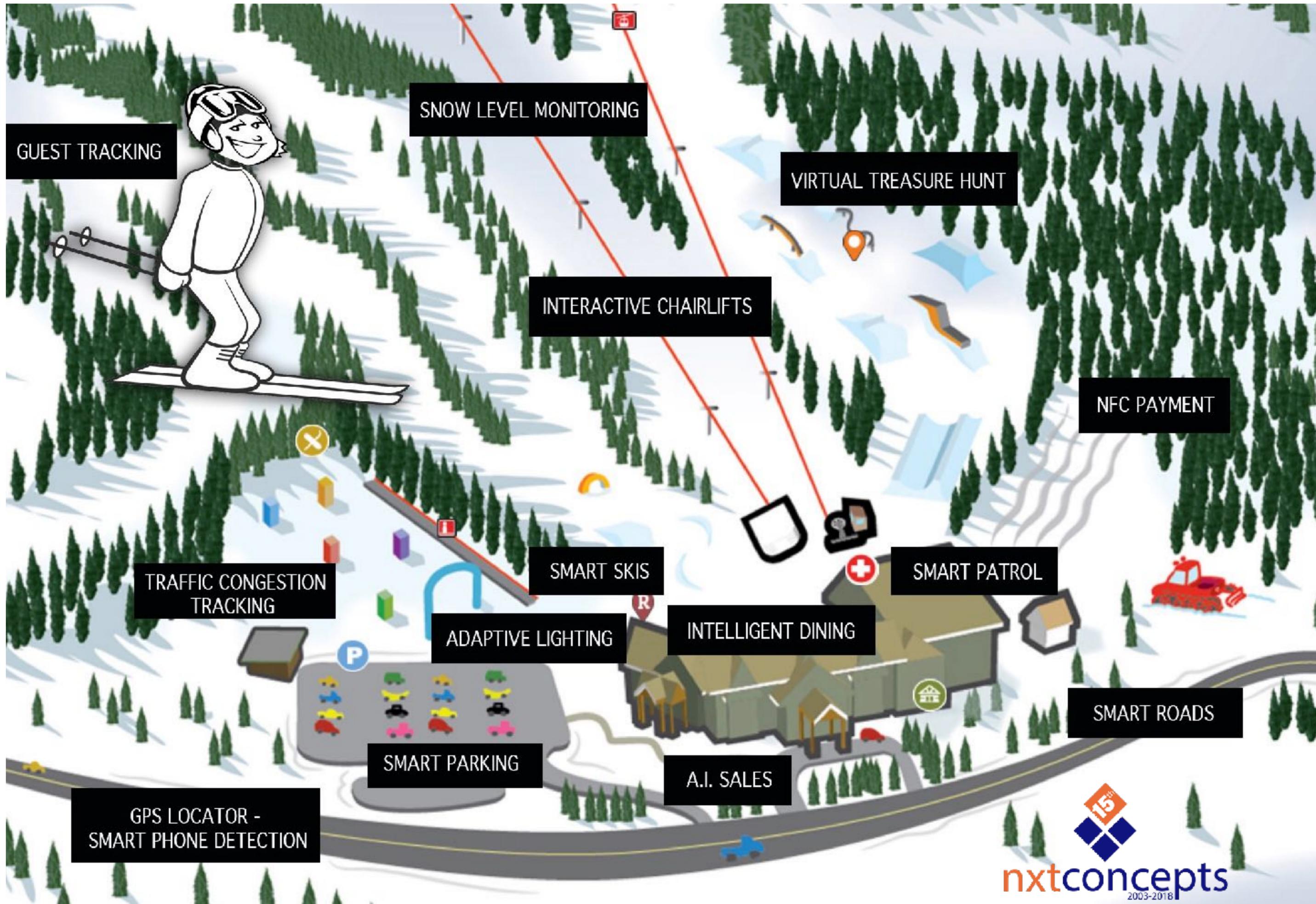
Computers doing cognitive tasks or things you would expect from humans such as judgements, assess circumstances and take action.

Computer stuff that feels smart.

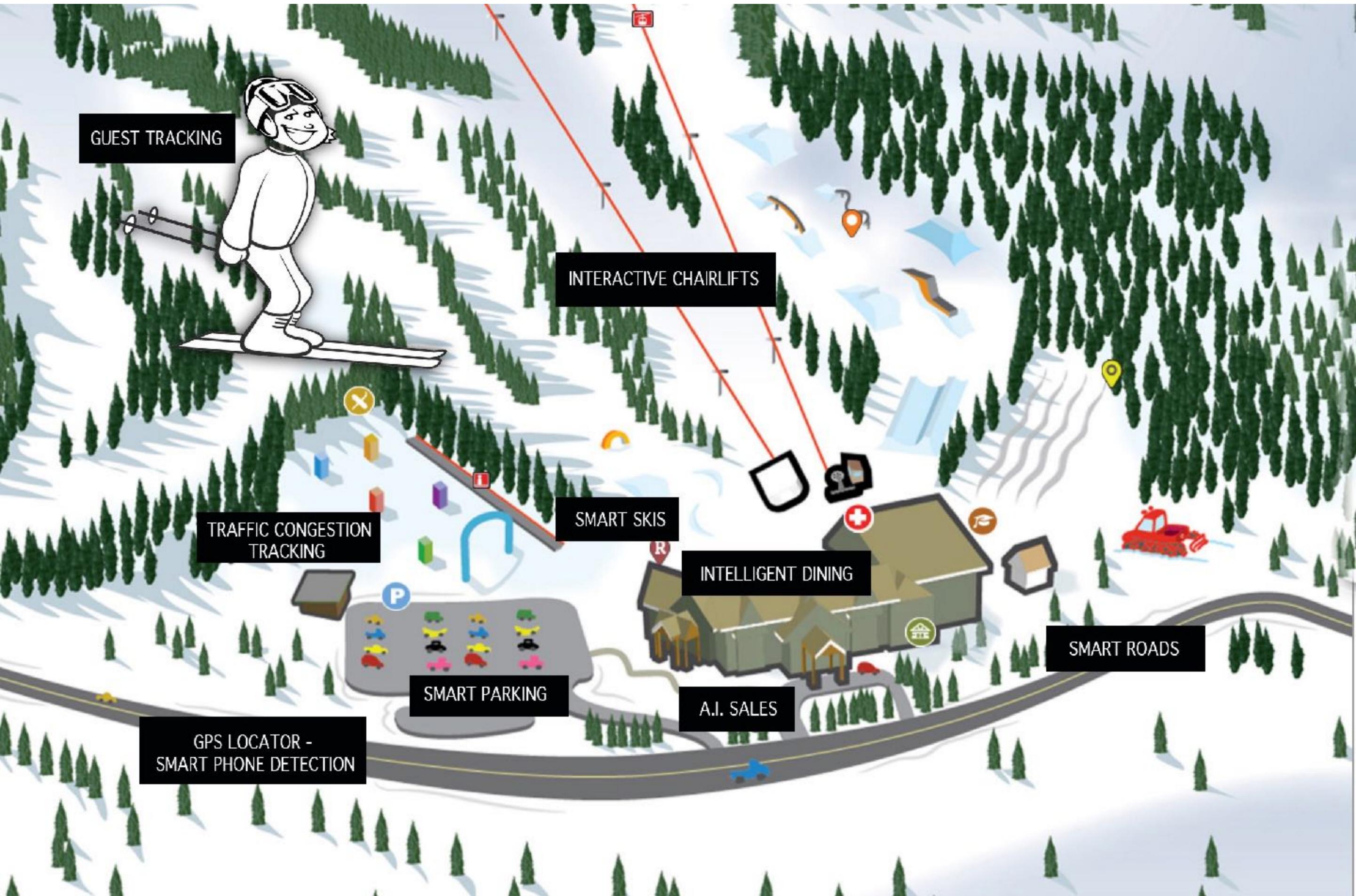
IoT (Internet of Things)

According to a recent Cisco report IoT will generate \$14.4 trillion in value across all industries in the next decade.

SMART SKI AREAS



GUESTS



GUEST TRACKING

INTERACTIVE CHAIRLIFTS

SMART SKIS

INTELLIGENT DINING

A.I. SALES

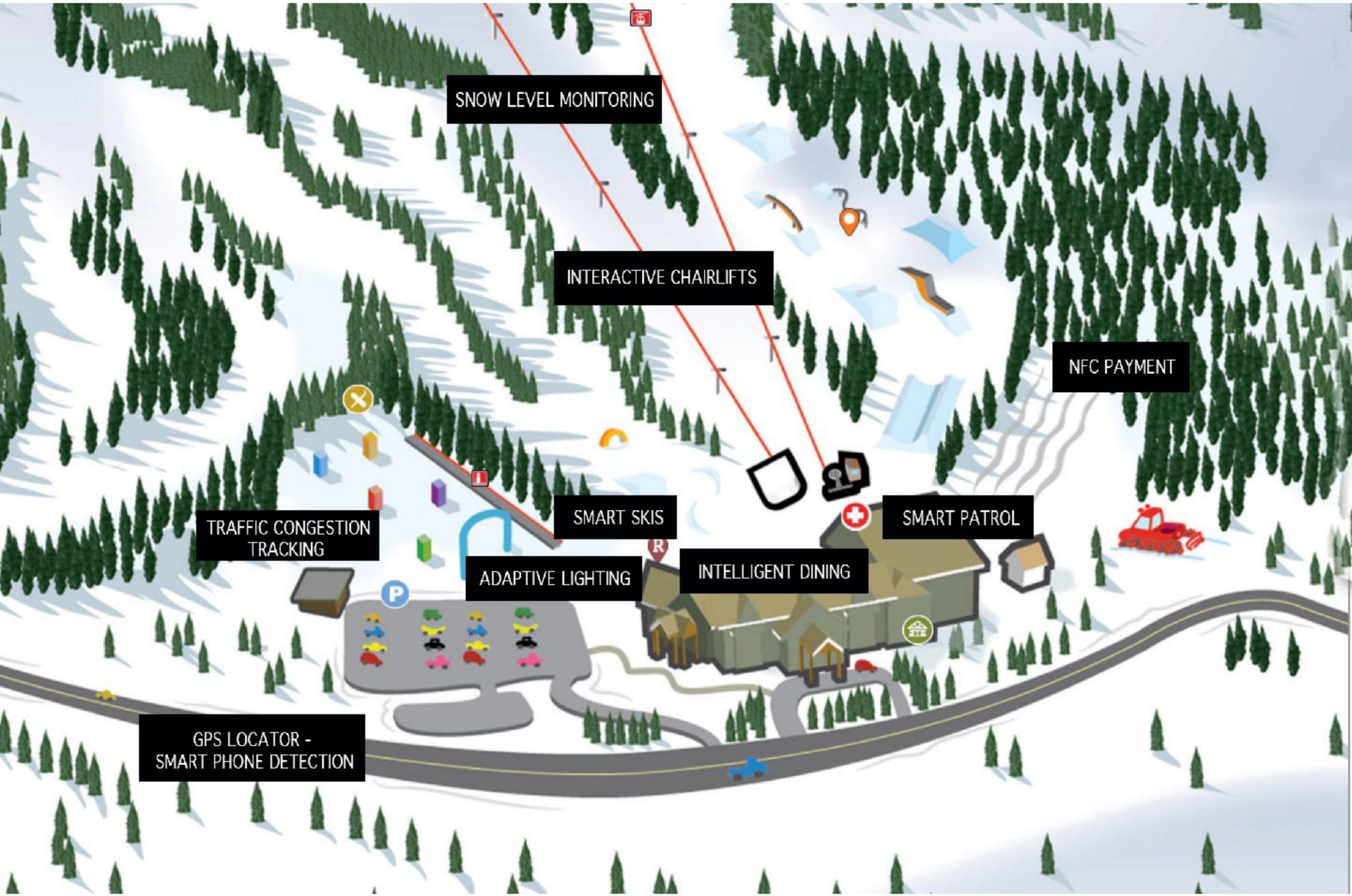
SMART PARKING

TRAFFIC CONGESTION TRACKING

GPS LOCATOR -
SMART PHONE DETECTION

SMART ROADS

OPERATIONS



SNOW LEVEL MONITORING

INTERACTIVE CHAIRLIFTS

NFC PAYMENT

TRAFFIC CONGESTION TRACKING

SMART SKIS

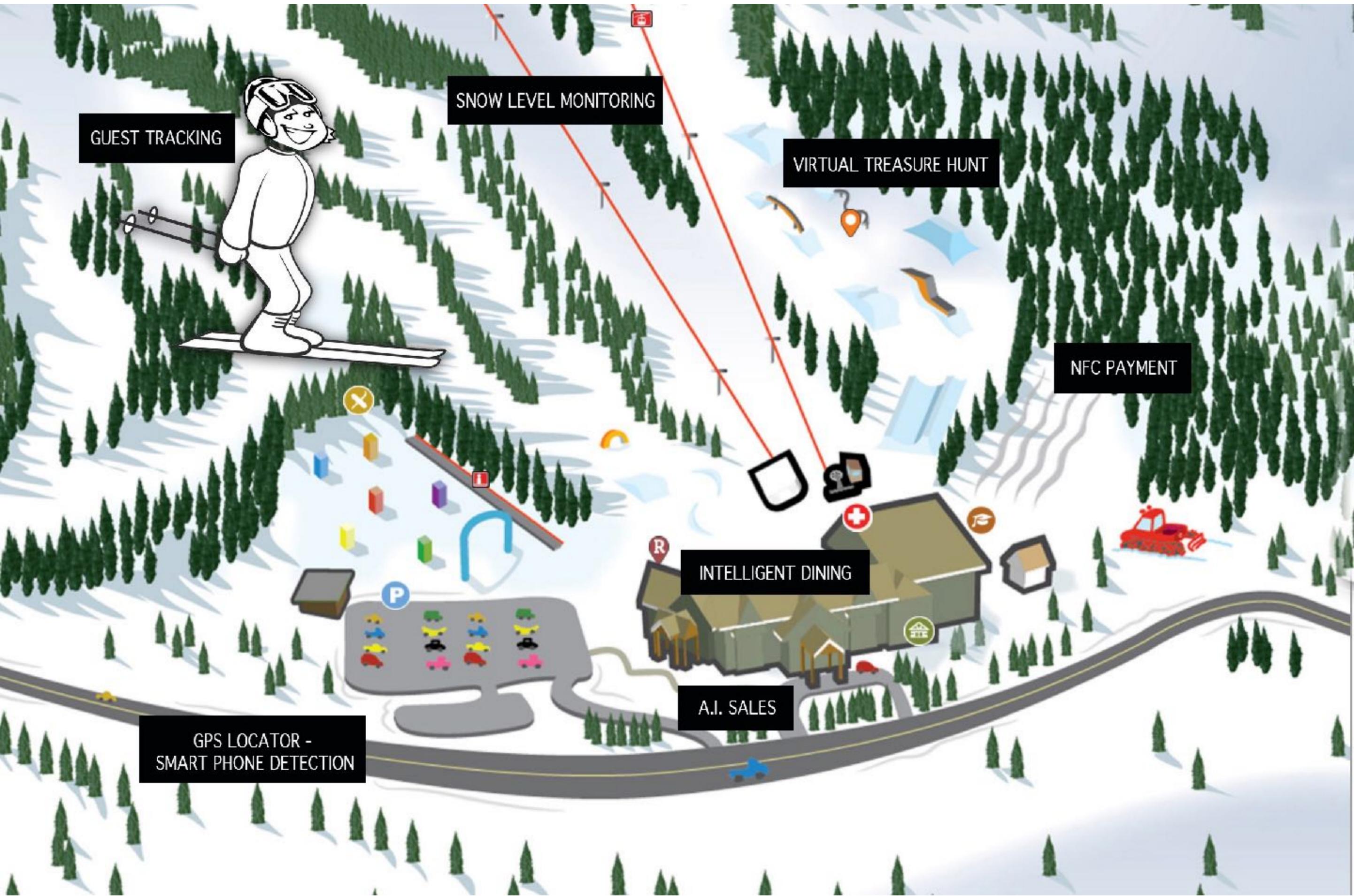
SMART PATROL

ADAPTIVE LIGHTING

INTELLIGENT DINING

GPS LOCATOR - SMART PHONE DETECTION

MARKETING & SALES



GUEST TRACKING

SNOW LEVEL MONITORING

VIRTUAL TREASURE HUNT

NFC PAYMENT

INTELLIGENT DINING

A.I. SALES

GPS LOCATOR -
SMART PHONE DETECTION

2018

REAL SMART RESORTS

Resorts from Snowbird, Utah, to Seven Springs, Penn., and everywhere in between are already using artificial intelligence to merge the digital and physical worlds to enhance the customer experience and resort operations. Tools such as large interactive displays, electronic check-ins, kiosks, and improved rental tracking systems are providing a much smoother and more pleasant ski experience.



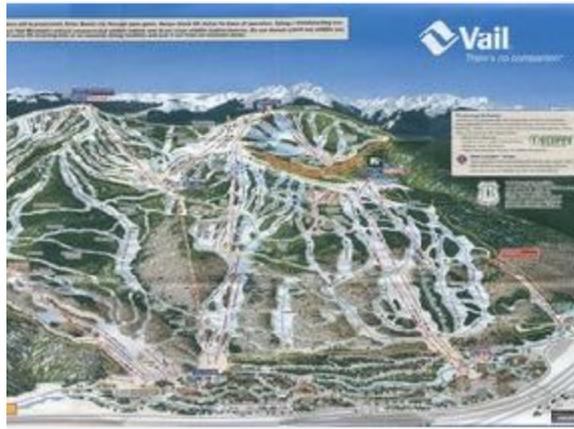
SNOWBIRD
UTAH



SEVEN SPRINGS
PENNSYLVANIA



SPIRIT MOUNTAIN
MINNESOTA



VAIL
COLORADO +

Dave Amirault @ozskier · Jul 27
Let's see what Alexa for Hospitality is all about. Would you be stoked on the ability to control your hotel experience with an in-room voice assistant?

Subject: Alexa for Hospitality - Getting Started

Dear Partner:

Thank you for your interest in Alexa for Hospitality. We are pleased to let you know that you have been selected as one of the participants in the limited private preview program for Alexa for Hospitality.

Alexa for Hospitality is a new experience that brings the simplicity and convenience of Alexa to hotels, vacation rentals and other hospitality locations. Alexa for Hospitality allows you to adapt Alexa to your hospitality venue through tools that make it easy to manage devices, configure settings, enable skills and assign property contacts at scale. You can further customize the Alexa experience by using the [Alexa Skills Kit](#) or a trusted skill developer to build and provision skills that integrate with your property's systems to support guest requests like "Alexa, order room service," "Alexa, can you bring me two more towels," or "Alexa, I'd like to check out." Alexa for Hospitality makes delivering a great customer experience simple. Just ask.

7

Rob Prew @rprew · Jul 28
Ha! Cool stuff. will be interesting to see how it plays out.

Ryan Romeike @RyanRomeike · Jul 28
Replying to @ozskier
[In hotel room after epic bluebird powder day]

"Alexa, show me today's action photos from Smiley on the TV."

This would be awesome. Preview on-mountain action photos/videos/portraits in your hotel room, and place an order for prints.

Or "Alexa, show me mineral basin webcam."



1

Dave Amirault @ozskier · Jul 28
You'd need an Alexa enabled display / television for that. One thing at a time.

B I G D A T A

SNOWBIRD

"AI is the heartbeat of the resort. We use predictive analysis in all our departments, not just marketing. Historic and real-time data can be accessed by a URL by front-line directors. That means we can take quick action when needed, anywhere at the resort."

D A V E A M I R A U L T ,
D I R E C T O R O F M A R K E T I N G



MACHINE LEARNING

SEVEN SPRINGS

“We have become much more data driven. This is where the industry is going. Every decision we make is based on analyzing our customer base, historical trends, and weather to predict where people will be skiing, what lifts should be running, and which areas will get the most food sales.”

LAURI JONES,
EXECUTIVE DIRECTOR OF OPERATIONS
SEVEN SPRINGS
HIDDEN VALLEY
LAUREL MOUNTAIN



INTELLIGENT SALES

SPIRIT MOUNTAIN

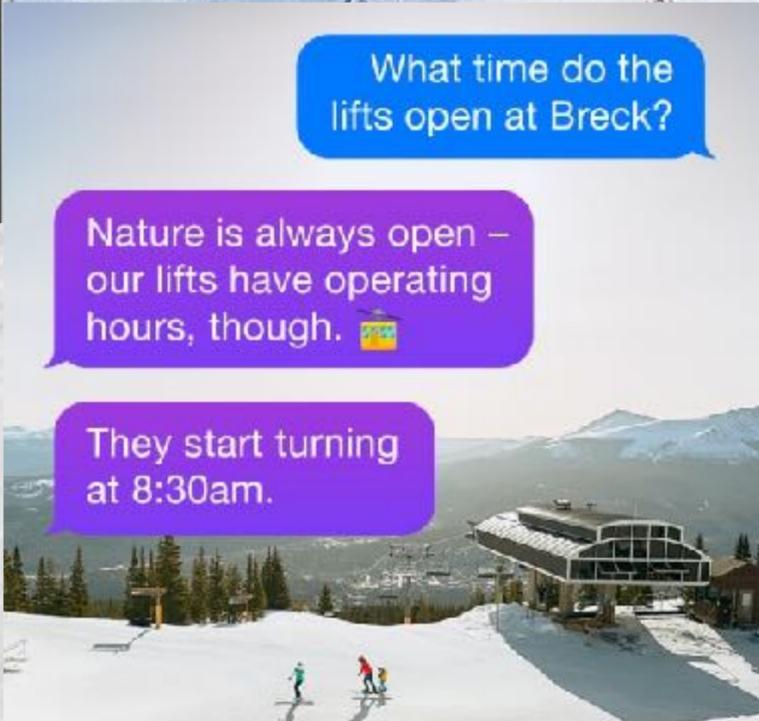
“Reporting is fabulous! No more waiting for reports or figuring out where to go to find the information I need. This new level of instant access has enabled us to be very responsive with new products and services. The integration to social media and personalized experience in the cart, which includes custom emails for an abandoned cart, has also increased our sales. Most importantly our customers are super happy with the experience.”

BRANDY DREAM ,
EXECUTIVE DIRECTOR

COMING FOR THE 2018/19 SKI SEASON

emma™

EPIC MOUNTAIN ASSISTANT



VIRTUAL ASSISTANT

VAIL RESORTS

“Emma will be available 24 hours a day, seven days a week to give our guests instant access to real-time information, so they can spend less time searching for information and more time enjoying their vacation. Vail Resorts continuously seeks innovative ways to serve our guests, and Emma will offer a seamless way to connect with information they need, exactly when they need it.”

ROB KATZ,
CHAIRMAN & CEO

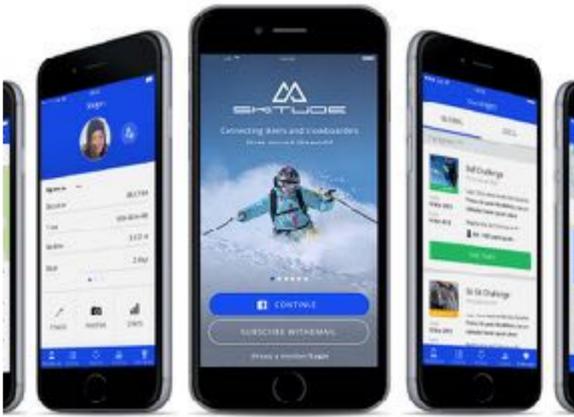
2 0 1 8

REAL SMART GEAR

AI is having an impact on all areas of the ski industry, not just at the resorts but also in the hard and soft goods arena. What consumers wear will impact how they interact with the resort—and their overall experience.



WEARABLES



APPS



HEAD GEAR



SKI EQUIPMENT

WEARABLE AI

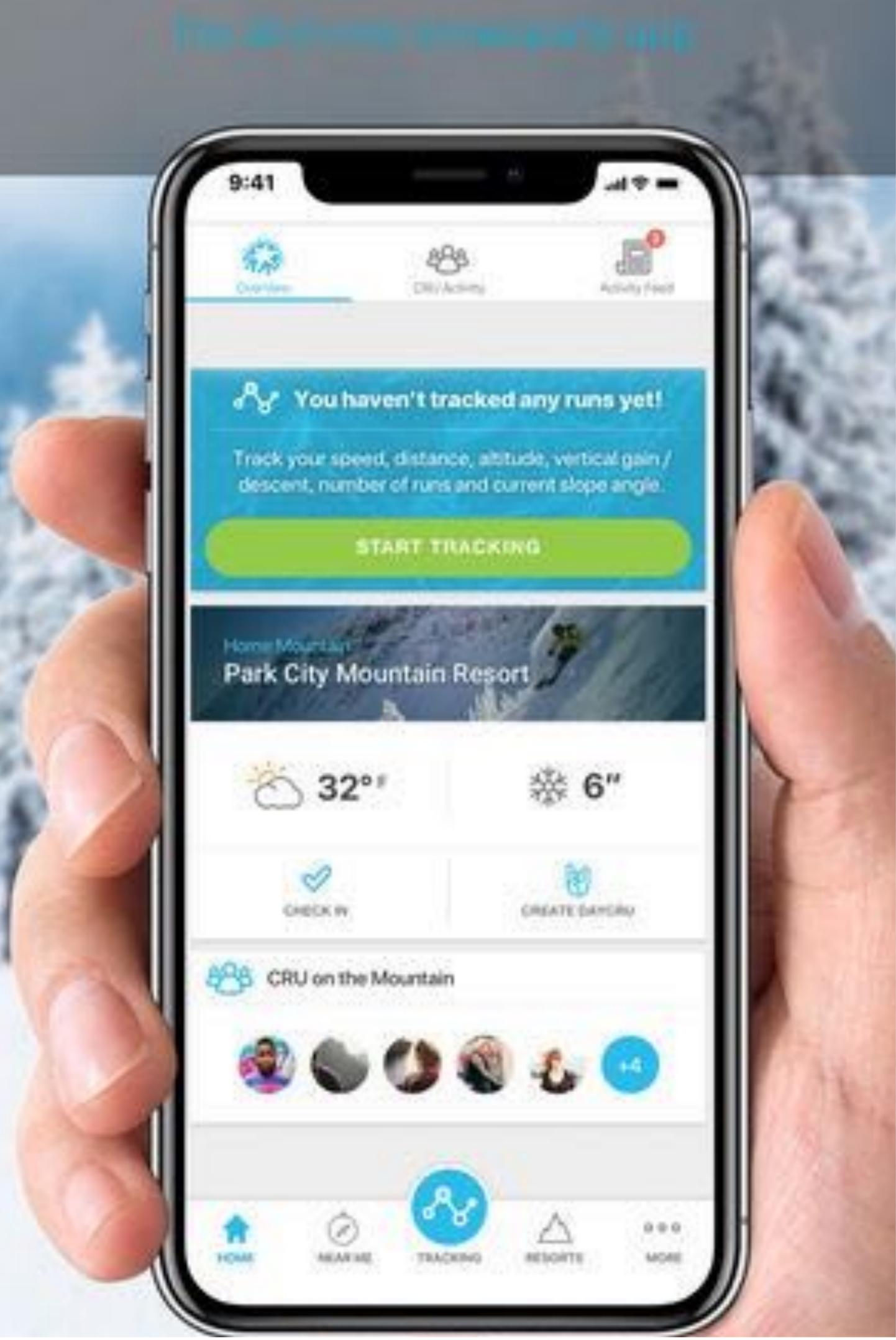
APPLE WATCH

Apple Watch sales in 2018 will be 20 million units.

In March 2018, Apple announced that athletes would be able to use the Apple Watch Series 3 to track their snow sport-specific activities, including recording runs, seeing vertical descent and other key stats, and contributing “active calorie measurements directly to the Apple Watch Activity app.”

DAILY IT NEWSPAPER,
DIGITIMES





WEARABLE AI

APPS

Developers are taking advantage of technology with built-in GPS and altimeters.

Ski apps like snoww, Slopes, Squaw Alpine, Snocru, and Ski Tracks now offering features such as total vertical descent and horizontal distance, number of runs, average and maximum speeds, total time spent on the slopes, and calories burned.

With the latest Siri functionality, you can now start apps like Slopes and snoww to track your runs using just your voice.

4K VIDEO AND 10MP PHOTOS ACTION CAMERA
VIDEO STABILIZATION
WIND NOISE REDUCTION
SINGLE, BURST, TIME LAPSED MODES
SHARE YOUR EXPERIENCE LIVE ON FACEBOOK, YOUTUBE, TWITTER.

HI DEF HEADPHONES & MICROPHONE

FRIEND/GROUP COMMUNICATIONS
SEND A VOICE OR A TEXT MESSAGE, INTERACT USING VOICE OR VIDEO TELECONFERENCE.

MAPS & NAVIGATION
UP TO DATE 3D MAPS WITH INTERACTIVE INFORMATION ON POINTS OF INTEREST. EXPLORE THE MOUNTAIN WITH A FLYOVER TOUR AND NAVIGATE THE ROUTE WITH HIGH PRECISION



FULLY TRANSPARENT SI-OLED DISPLAY
ENJOY THE ULTIMATE IN AUGMENTED REALITY THANKS TO HD DISPLAY (720P). AMAZING CRISP IMAGE AND VIVID COLORS EVEN ON A BRIGHTEST SUNNY DAY.

SEE YOUR STATS:
> SPEED
> ALTITUDE
> HEART RATE
> DISTANCE TRAVELED
> TEMPERATURE
> WIND SPEED
> FRIENDS LOCATION RADAR



VIRTUAL SOS BUTTON:
A MANUAL AND/OR AN AUTOMATIC ACTIVATION OF AN EMERGENCY ASSISTANCE REQUEST TO THE RESORT'S RESCUE TEAM.

WEARABLE AI

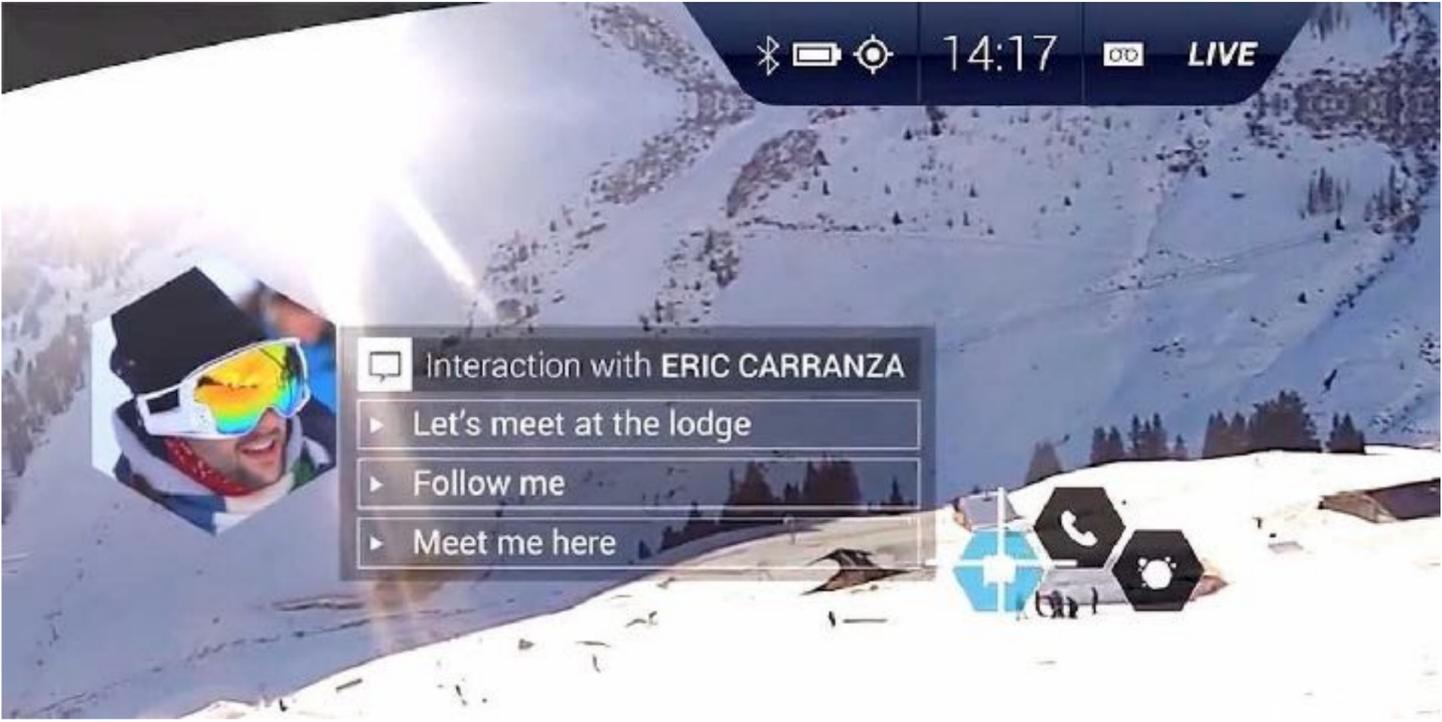
HEAD GEAR

Today's gear can bring augmented reality (AR) to the slopes.

With virtual maps and highlighted points of interest, you'll never get lost. You can record your time on the slopes with an integrated camera, then share your experience on Facebook LIVE with online friends.

While on the slopes, the hands-free operation makes it easy to find Friends, get help with a virtual SOS button and of course view your stats in real-time - speed, heart rate, temperature, wind speed, and more.

RIDEON SKI GOGGLES & RIDEON MOHAWK HELMET



WEARABLE AI

SKI EQUIPMENT

Elan claims it's building the world's first-ever smart alpine ski, and unveiled a prototype of its Smart Ski technology at the 2018 IPSO trade show in late January.

Show participants were able to test out the model and, according to an Elan press release, "Through the sensation of skiing movements, the Smart Ski captured immediate data and recorded on a nearby computer screen."

For ski and snowboard boots, **PIQ Robot** bills itself as "Sport Intelligence." A PIQ Robot uses a movement tracking advanced sensor system and analyzes the motion of your ski runs. The company has partnered with **Rossignol** to show users turns, jumps, speed, and distance, which you can then compare with other users on the same run and in their online community.



MEASURE YOUR SKIING DYNAMICS



EASY TO USE



PRECISE SELF-COACHING TOOL



SENSES ACTION & REACTION OF THE SKIER.

2018

REAL SMART MARKETING

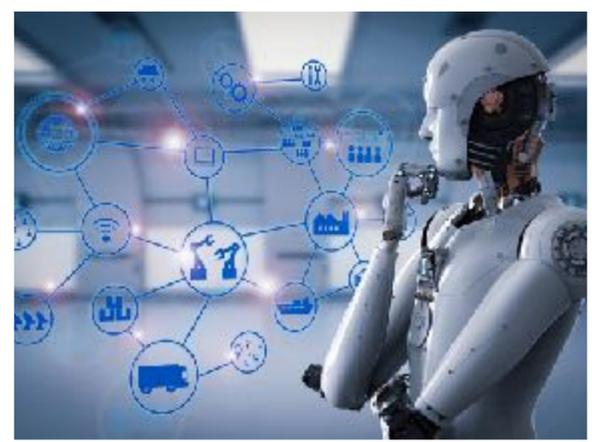
AI is having an impact on marketing from sales to PR.



BIG DATA



TARGETING



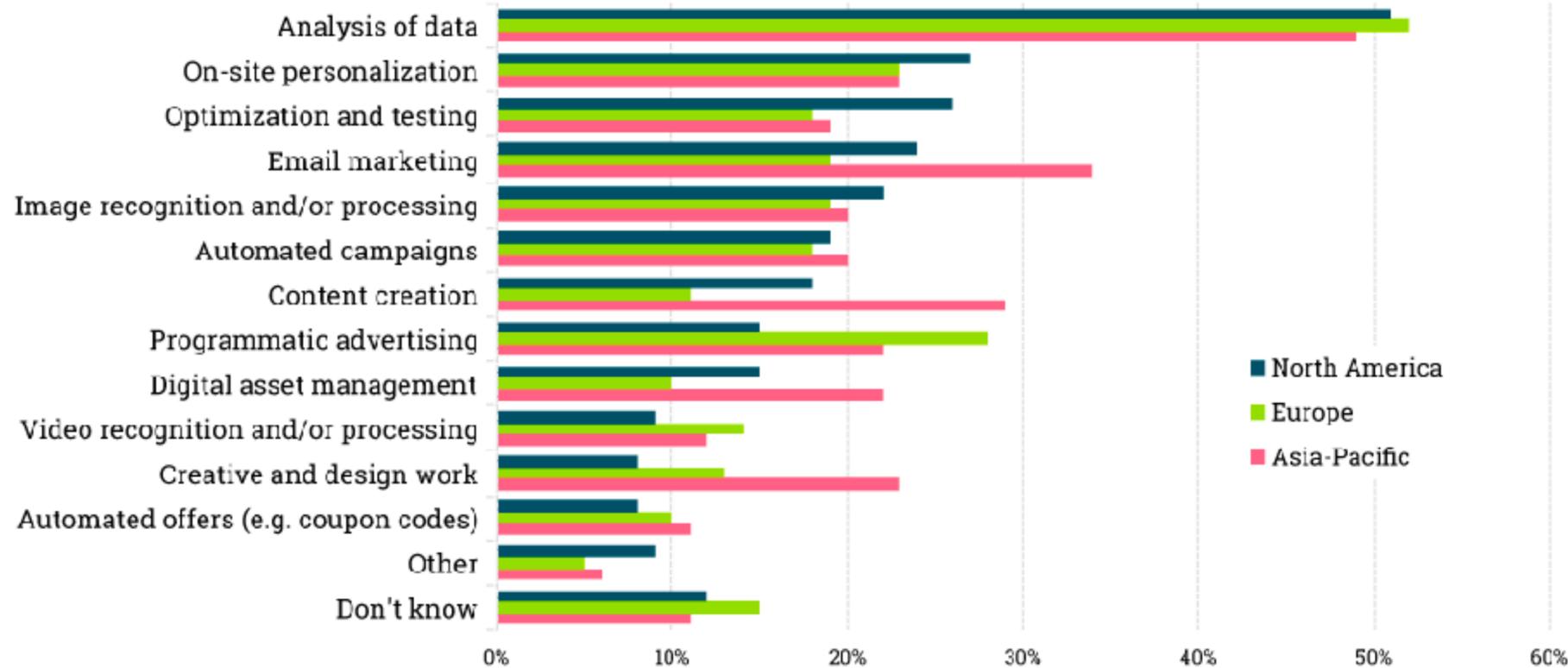
AUTOMATION



PREDICTIVE

BIG DATA

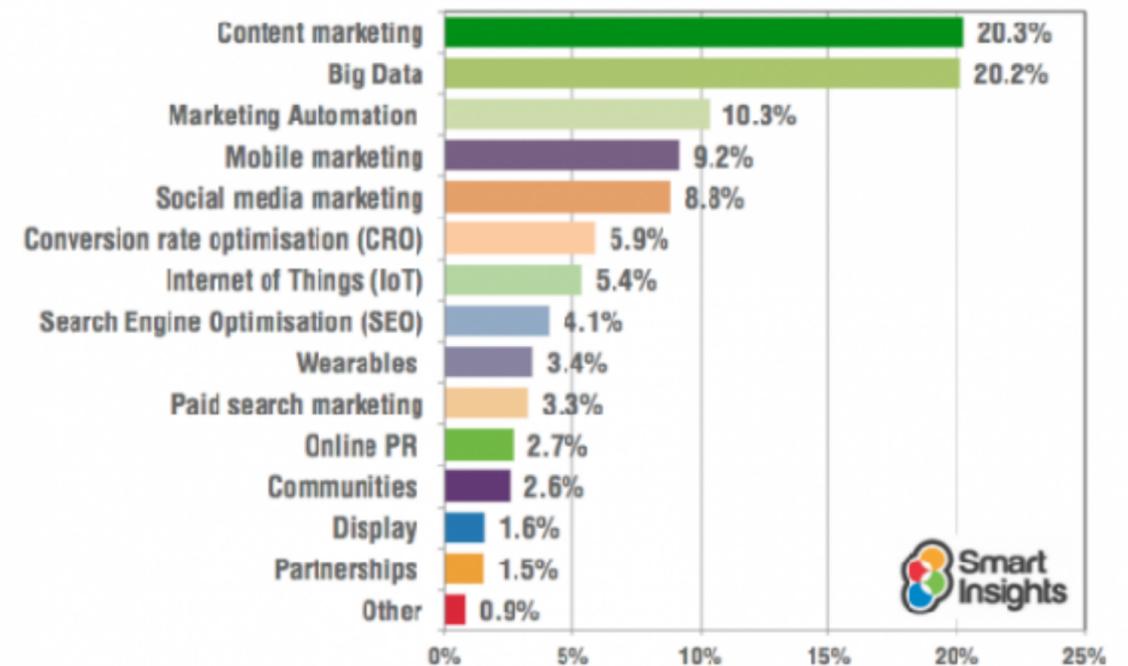
How Companies Are Currently Using AI



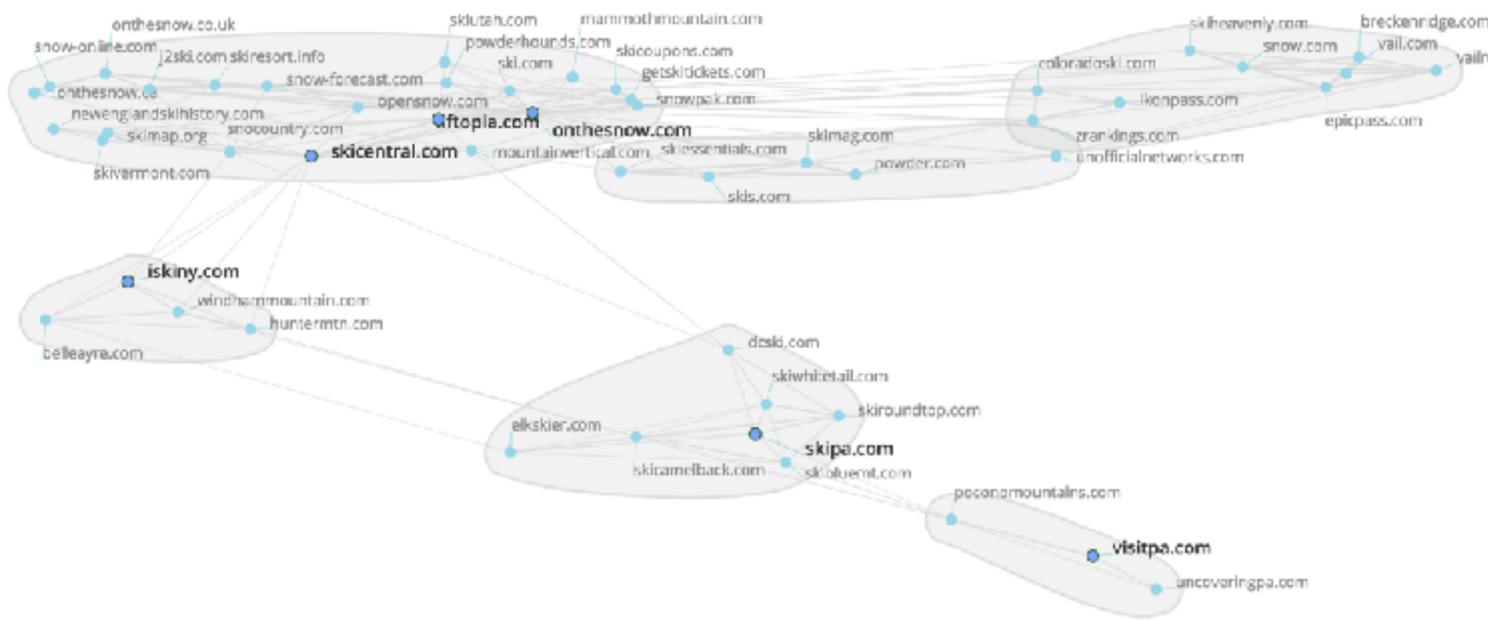
Published on MarketingCharts.com in March 2018 | Data Source: Econsultancy / Adobe
 Based on a survey of almost 12,800 digital marketing and e-commerce professionals. The plurality of respondents are from Europe, with the Asia-Pacific and North American regions the next-most heavily represented. Respondents came from a mix of company sizes, types, job titles and roles.

**TARGETING.
 AUTOMATION.
 OPTIMIZED ADVERTISING.**

Top-rated digital marketing techniques 2017



TARGETING



Demographics

Gender Education Location Age Income Children

Site	Male	Female
	Internet Average	Internet Average
visitpa.com	<div style="width: 40%; background-color: #28a745;"></div>	<div style="width: 60%; background-color: #28a745;"></div>
onthesnow.com	<div style="width: 50%; background-color: #28a745;"></div>	<div style="width: 50%; background-color: #28a745;"></div>
skicentral.com	<div style="width: 30%; background-color: #28a745;"></div>	<div style="width: 70%; background-color: #28a745;"></div>
liftopia.com	<div style="width: 50%; background-color: #28a745;"></div>	<div style="width: 50%; background-color: #28a745;"></div>
skipa.com	<div style="width: 60%; background-color: #28a745;"></div>	<div style="width: 40%; background-color: #28a745;"></div>

liftopia.com Explore Interests

The audience of liftopia.com is interested in sites in these 74 categories.

Sorted by: Interest score - high to low ⌵

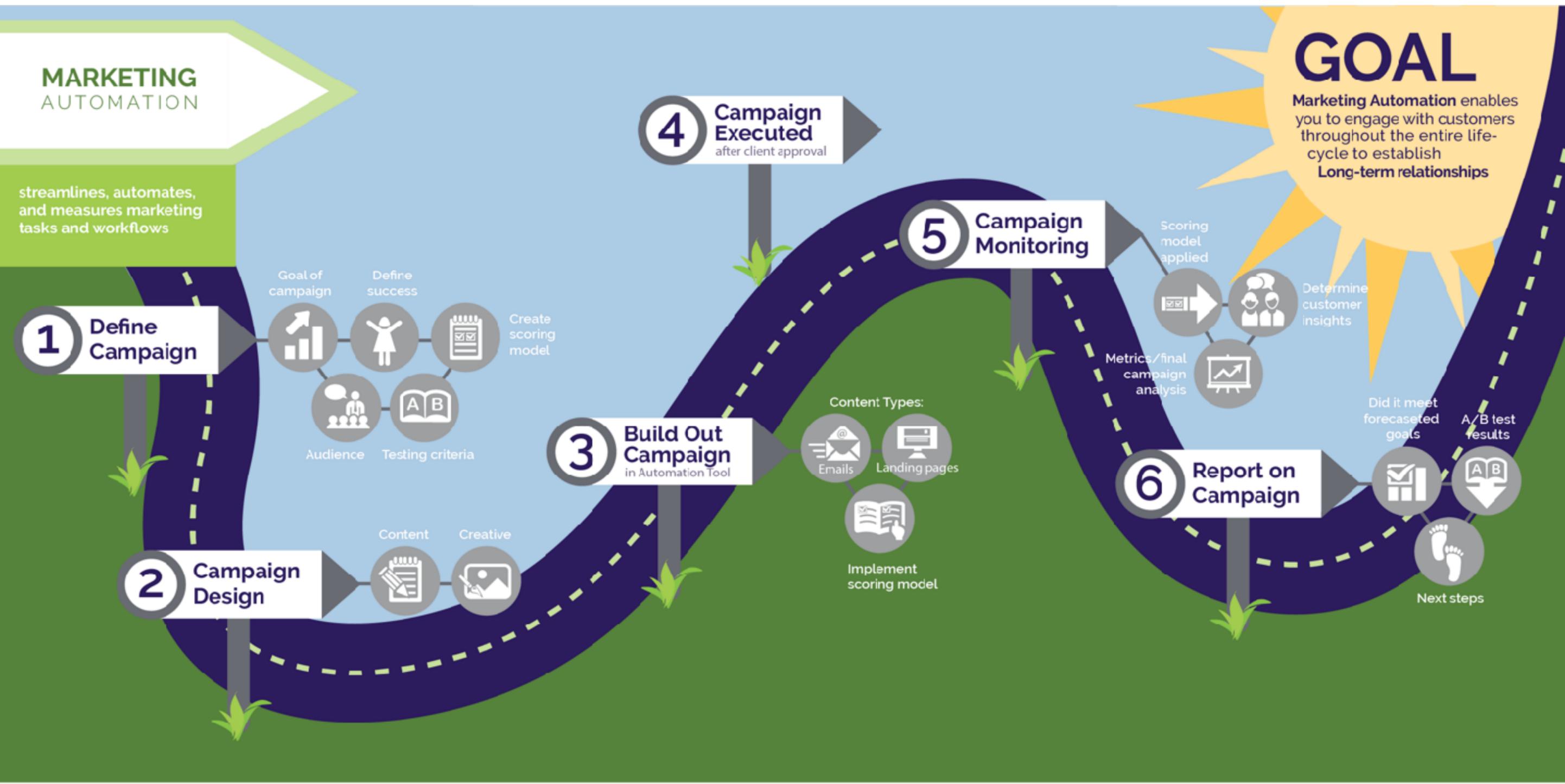
	Sports/ Winter Sports Preview +	Interest ?	Likelihood to visit ? 29.9x	% of audience ? 100%	Sites ? 2	See details >
	Consumer Goods and Retail/ Recreation Preview +	Interest ?	Likelihood to visit ? 4.6x	% of audience ? 53%	Sites ? 3	See details >
	Travel and Transport/ Lodging Preview +	Interest ?	Likelihood to visit ? 3.4x	% of audience ? 64%	Sites ? 4	See details >
	Travel and Transport/ Other Preview +	Interest ?	Likelihood to visit ? 2.6x	% of audience ? 81%	Sites ? 8	See details >
	Consumer Goods and Retail/ Sporting Goods Preview +	Interest ?	Likelihood to visit ? 3.9x	% of audience ? 53%	Sites ? 3	See details >
	News and Media/ Weather Preview +	Interest ?	Likelihood to visit ? 3x	% of audience ? 60%	Sites ? 4	See details >

Demographics

Gender Education Location Age Income Children

Site	0-30k	30-60k	60-100k	100k+
	Internet Average	Internet Average	Internet Average	Internet Average
visitpa.com	<div style="width: 10%; background-color: #28a745;"></div>	<div style="width: 40%; background-color: #28a745;"></div>	<div style="width: 30%; background-color: #28a745;"></div>	<div style="width: 20%; background-color: #28a745;"></div>
onthesnow.com	<div style="width: 10%; background-color: #28a745;"></div>	<div style="width: 30%; background-color: #28a745;"></div>	<div style="width: 40%; background-color: #28a745;"></div>	<div style="width: 20%; background-color: #28a745;"></div>
skicentral.com	<div style="width: 10%; background-color: #28a745;"></div>	<div style="width: 20%; background-color: #28a745;"></div>	<div style="width: 40%; background-color: #28a745;"></div>	<div style="width: 30%; background-color: #28a745;"></div>
liftopia.com	<div style="width: 10%; background-color: #28a745;"></div>	<div style="width: 30%; background-color: #28a745;"></div>	<div style="width: 30%; background-color: #28a745;"></div>	<div style="width: 30%; background-color: #28a745;"></div>
skipa.com	<div style="width: 0%; background-color: #28a745;"></div>	<div style="width: 0%; background-color: #28a745;"></div>	<div style="width: 0%; background-color: #28a745;"></div>	<div style="width: 100%; background-color: #28a745;"></div>

AUTOMATION



BULK ACTION & FLIGHTING TOOLS

Welcome!

Save time by instantly making bid, budget, and status changes across all your account activity.
Choose a Bulk Action template below to get started.

All Bidding Quality Budget

+ Create New Build a new Bulk Action from scratch	Quality Score Check and Raise If Quality Score < 5, THEN Raise Bid 10%	Change Budgets Increase Budget by 20% for all campaigns
Increase Ad Group Bids Increase Bid on all Ad Groups / Ad Sets	Pause Low CTR Ads If CTR < 1%, THEN Pause Ad	Add Budget Headroom If Campaign Spend > 1000 & Cost per Click < 5, THEN Raise Budget 10%

Welcome!

Show campaigns, ad groups, or ad creatives in an ordered sequence based on specified dates.
Choose a Flighting template to get started.

All Seasonal Sequencing

+ Create New Build a new Flight from scratch	Run Valentine's Day Creative Run a pre-holiday and post-holiday set of ad creative	Launch Christmas Campaigns Turn on your Christmas campaigns
Change May's Ad Group Targeting Swap in some different Ad Groups with new targeting	Turn On Summer Sale Ads Get those summer ads live	Run Campaigns During Vacation Taking time off? Schedule your Campaigns to start while you're out
Sequence Your Ad Messaging Tell a story with your ads by running them on different dates	Show Incremental Discounts Getting closer to a sale deadline? Increase the discount each week	

CONTENT AUTOMATION TOOLS

Welcome!

Improve ad performance by keeping your creatives fresh and testing ad variations.
Choose a Rotation template to get started.

- All
- Facebook
- AdWords
- Twitter
- Bing

 Create New Build a new Rotation from scratch	 Keep Facebook Creatives Fresh Rotate 2 ads every week	 Keep AdWords Ads Fresh Rotate 3 ads every week
 Find Best Converting Ad Find your best Facebook ad based on CTR	 Generate Facebook Results Find your best Facebook ads based on Results	 Result-based Targeting Test Rotate Ad Sets based on Results
 Conversion-based Ad Set Testing Rotate Ad Sets based on Conversions	 Test Twitter Targeting Rotate Twitter Ad Groups based on Impressions and Results	 Test Twitter Targeting Rotate Twitter Ad Groups based on Spend and CPR
 Rotate Your AdWords Ads Create your own AdWords ad test	 Test AdWords Targeting Find Ad Groups with the lowest CPA	 Find Best Converting Bing Ad Create your own Bing ad test
 Test Bing Targeting Find Ad Groups with the lowest CPA		

BUDGETING TOOLS

Welcome!

Eliminate tedious tasks by applying automatic changes across your campaigns. Choose a Rule template below to get started.

- All
- Quality
- Bidding
- Social
- Budget

 Create New Build a new Rule from scratch	 Pause Low Performing Keywords Pause keywords where Conversions > 10 AND Cost/Conv > 20 in last 30 days	 Raise Ad Position If Avg Position > 5 AND Impressions > 50 AND Quality Score > 6, THEN Raise Bid 10%
 Increase Delivery on Social If Spend < 100 AND Impressions < 1000 AND CTR < .8, THEN Raise Bid	 Prevent Facebook Overspending If Spend > 200 and Cost per Registration > 50 and Registrations > 1, THEN Decrease Budget	 Boost Budget on Low CPA If Spend > 500 and Cost per Conversion < 30, THEN Increase Budget by 50% (Max 5000)
 Pause Low Performers If Spend > 2000 and Cost per Conversion > 80, THEN Pause Ad Group / Ad Set	 E-commerce Ads Not Converting If Spend > 500 and Conversion Rate < 10%, THEN Pause Ad	 Add Budget Headroom If Campaign Spend > 1000 and Cost per Click < 5, THEN Raise Budget 10% (Max 10000)

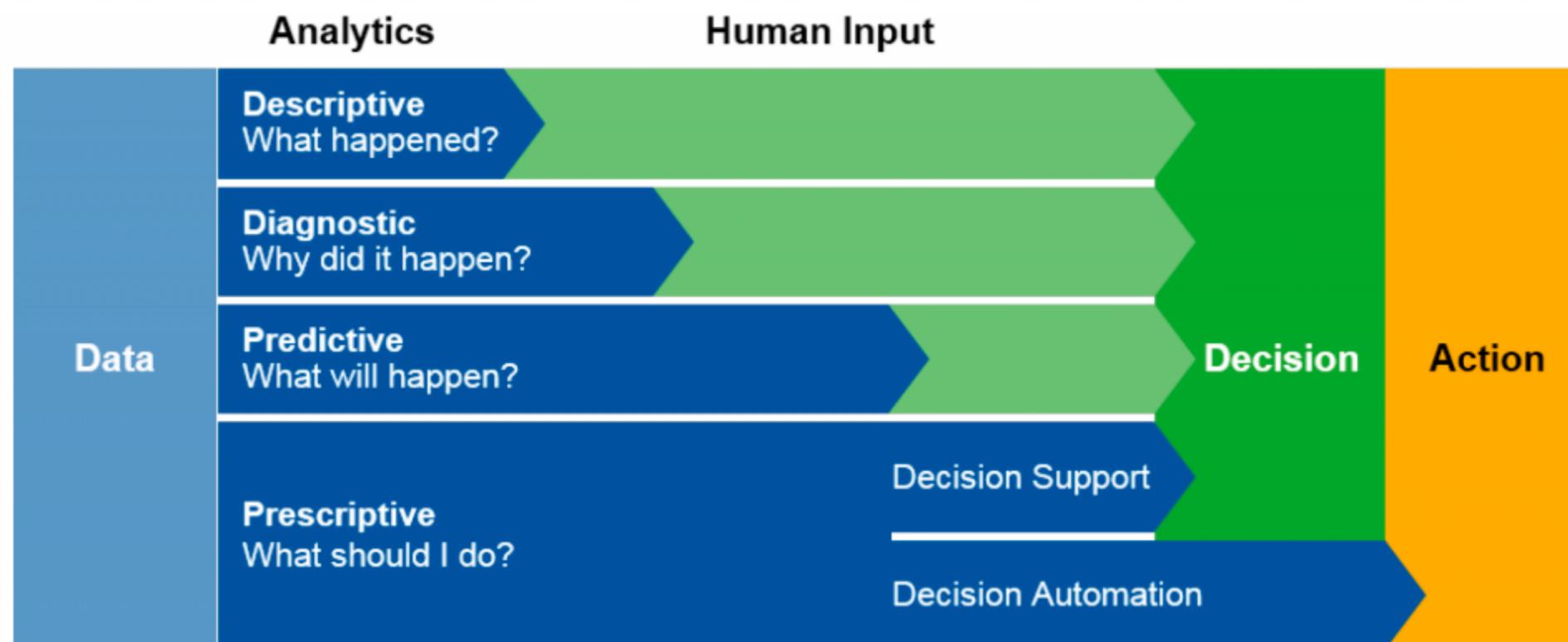
PREDICTIVE MARKETING



TOM
FISH
BURNE

PREDICTIVE MARKETING

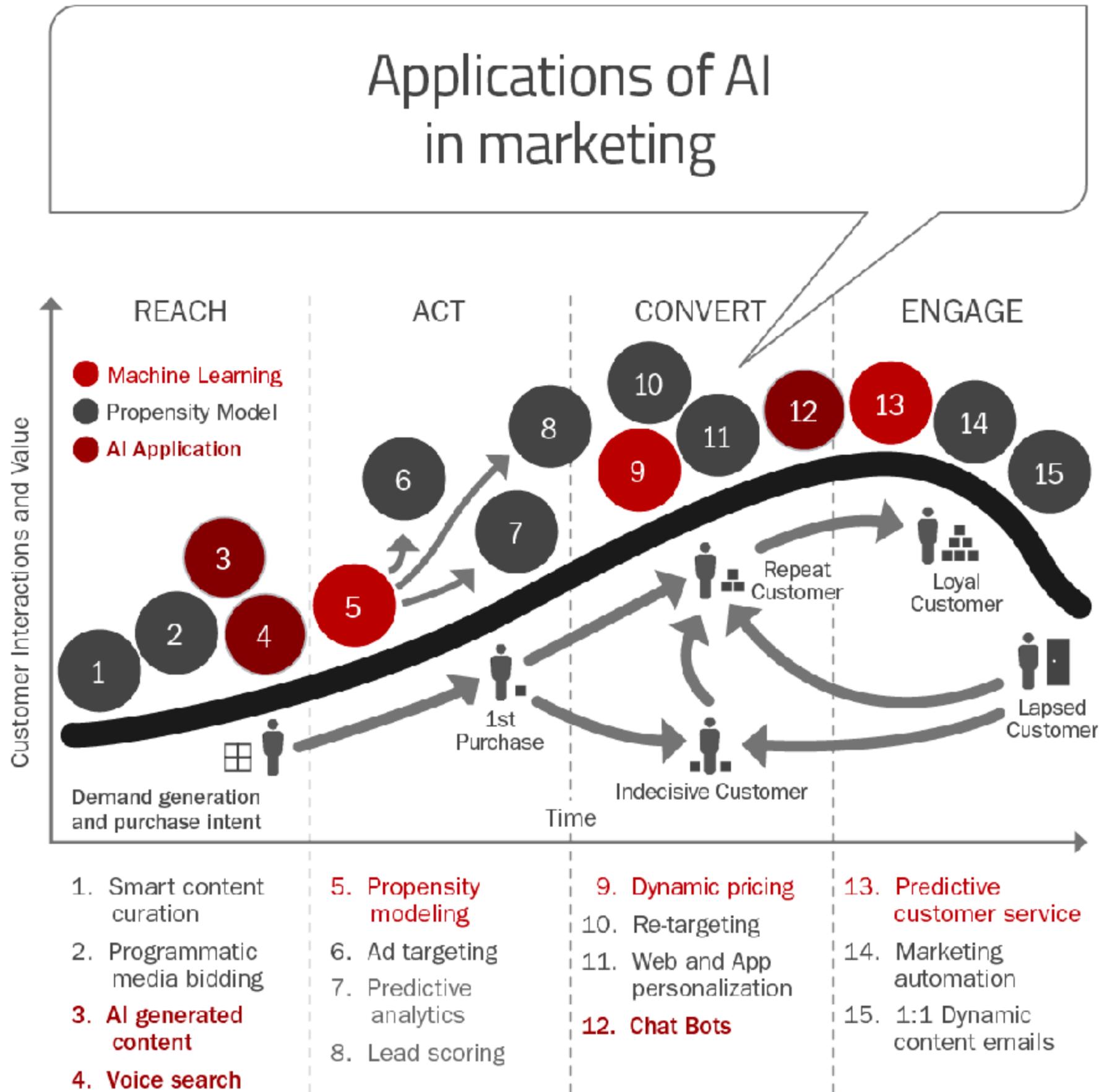
Figure 1. Analytics Capabilities Framework



Source: Gartner (May 2015)

Without the right tools (AI Platform), big data can overwhelm rather than empower.

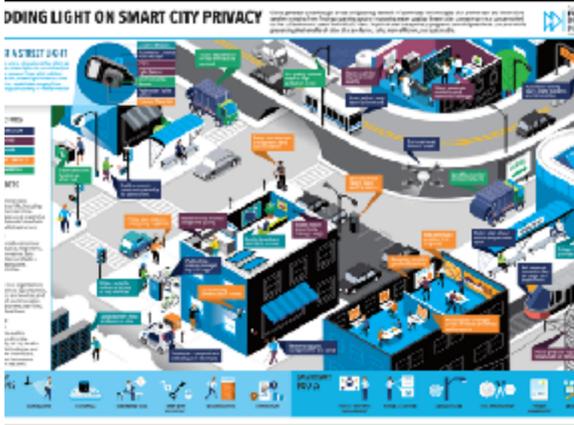
MODERN MARKETING SUMMARY



SOURCE: Smart Insights © March 2018 The Financial Brand

2 0 1 8

AI CONCERNS



PRIVACY



SECURITY



ETHICS

DOES PRIVACY MATTER ANYMORE?

THE DATA-SHARING MINDSETS

Not all consumers respond to marketers' efforts to collect their personal data the same way. The quadrants below profile the ways consumers perceive and act on sharing their data:

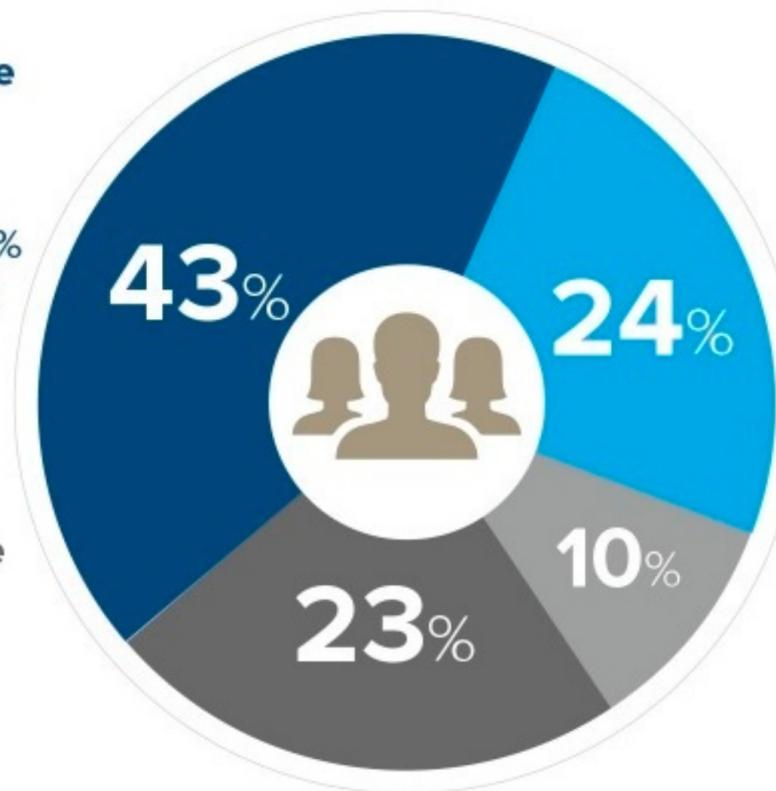
DEFENDER

High Defense, Not Happy To Share



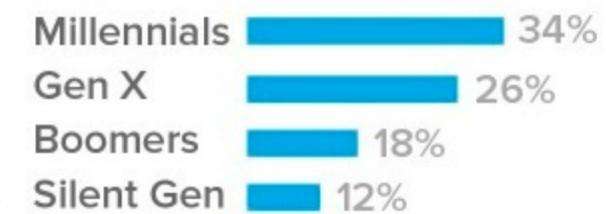
RESIGNED

Low Defense, Not Happy To Share



SAVVY AND IN CONTROL

High Defense, Happy To Share



HAPPY GO LUCKY

Low Defense, Happy To Share:



AI CONCERNS

PRIVACY VS AI AND IoT



A I C O N C E R N S

WHAT ABOUT SECURITY?

With sensors collecting data on everything we currently do, the IoT is a potentially vast hacker paradise.

Six out of 10 devices that provide user interfaces were vulnerable to a range of issues such as persistent XSS and weak credentials.

80%
of devices along with their cloud and mobile application components failed to require passwords of a sufficient complexity and length.

90%
of devices collected at least one piece of personal information via the device, the cloud or its mobile application



70%
of devices used unencrypted network services.

70%
of devices along with their cloud and mobile application enable an attacker to identify valid user accounts through account enumeration.

A I C O N C E R N S

RESPONSIBILITY & DIFFICULT DECISIONS

AI automates processes and can make critical decisions in a real-time mode decided in milliseconds.

The trolley problem

The person can choose to divert the tram from the main track, saving five people on the track, but killing the worker on the other track.

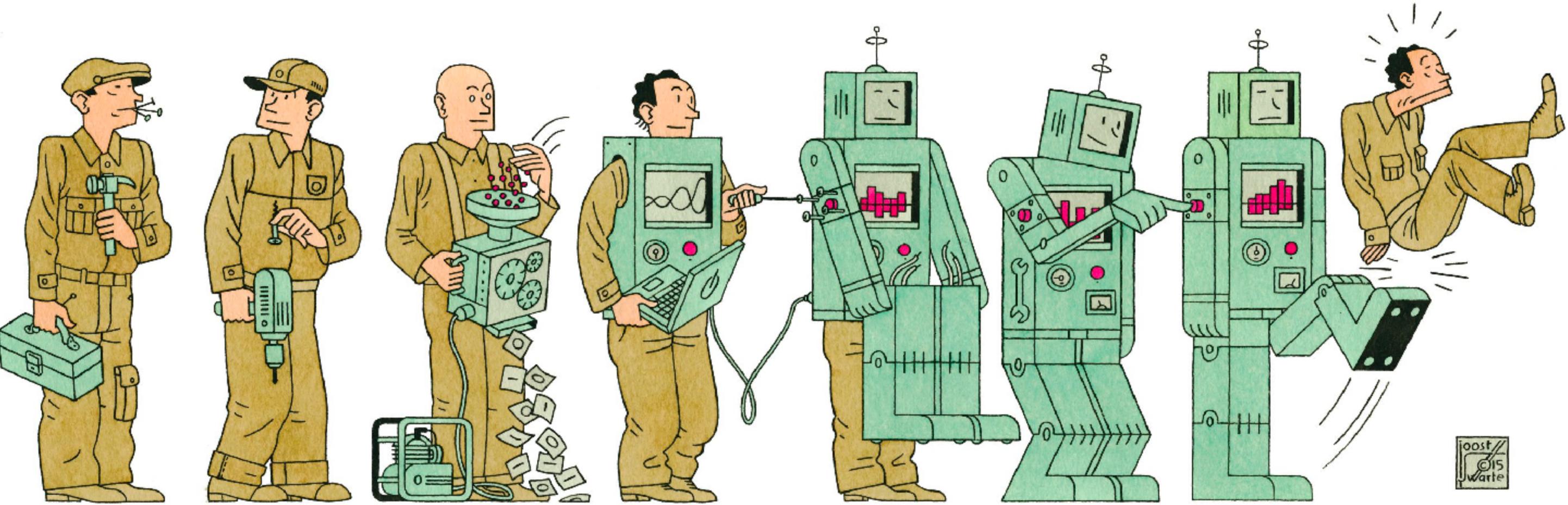
The diagram illustrates the trolley problem. At the top, a trolley is positioned on a track. A person stands next to a lever that can switch the trolley's path. A large red question mark is placed above the person, indicating the choice to be made. The track splits into two paths. The left path leads to a group of five people standing on the track. The right path leads to a single person standing on the track. The trolley is currently on the left path, but the lever allows it to be switched to the right path.

theconversation.com Images adapted from shutterstock.com

A I C O N C E R N S

RESPONSIBILITY & DIFFICULT DECISIONS

Technological unemployment - jobs replaced by intelligent machines or systems



AI CONCERNS

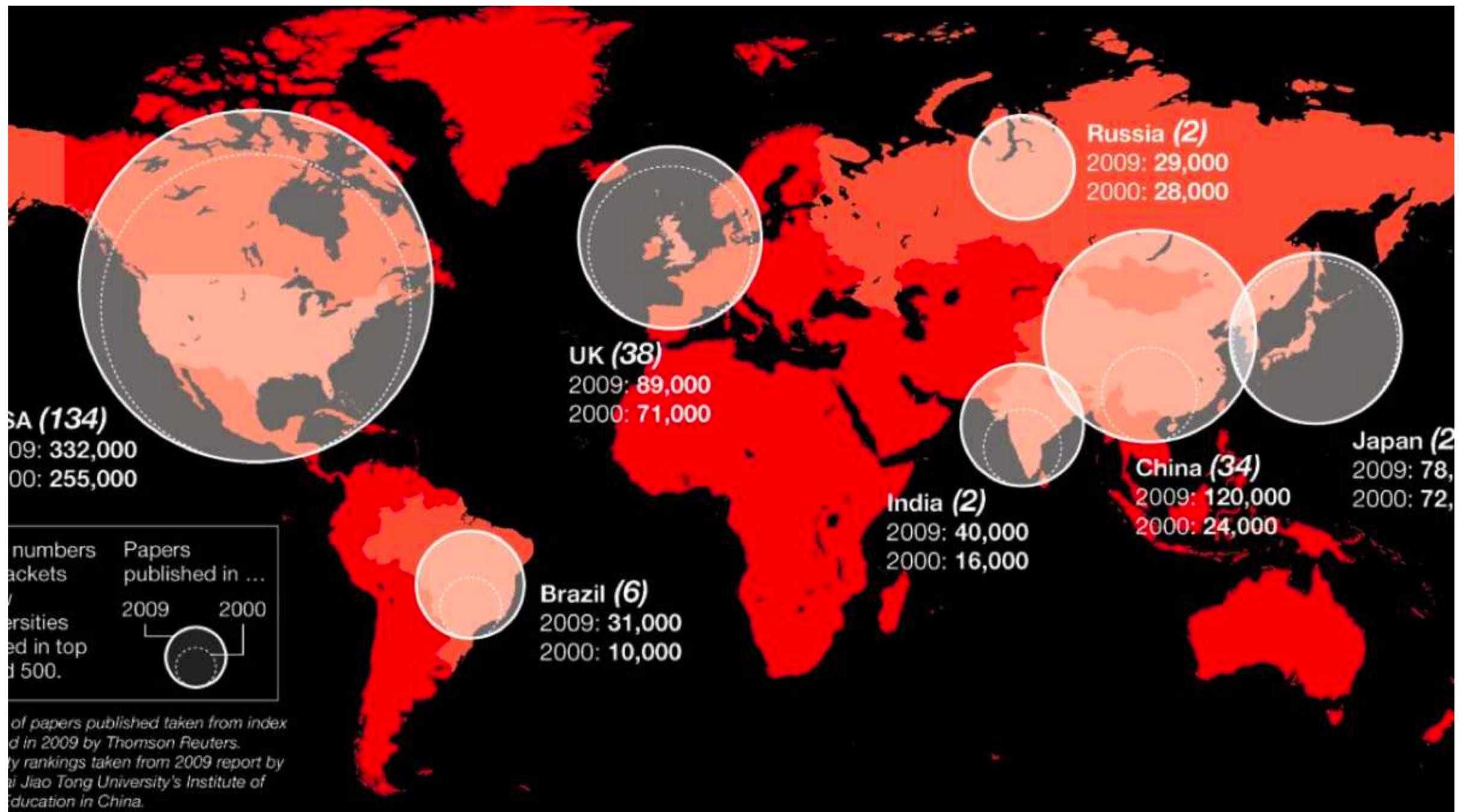
UNBIASED SYSTEMS

How can we ensure that the initial training of the AI algorithms is unbiased?



AI SUPERPOWERS

If you think of this AI output at scale — analyzing data at the population level — these predictions and insights could describe the synthesis, state and dynamics of an entire population. This would obviously provide extreme power to those controlling such systems over this wealth of accumulated data.



WHAT'S NEXT?

AI The
future of
learning
is in our
hands



GET IN TOUCH WITH US



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VERMONT
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Resources

- “Smart Ski Use Case,” <http://wise-iot.eu/2017/04/20/smart-ski-use-case>
- “What Consumers Really Think About AI: A Global Study,” <https://www.pega.com/ai-survey>
- Alexa Skill Kit, <https://www.alexaskillstore.com>
- RideOn Augmented Reality, <https://www.rideonvision.com/new>
- PiQ Robot Sport Intelligence, <https://piq.com/ski>