

# The Intelligent Enterprise: Examples from the Front Lines

Session Id: ASUG82850

**Timo Elliott**

Global Innovation Evangelist, SAP



@timoelliott

THE BEST RUN



# The Intelligent Enterprise: Examples from the Front Lines



@timoelliott



Timo Elliott, VP, Global Innovation Evangelist, SAP

Internet of things

New business models

Mobile experiences

Analytics and predictive

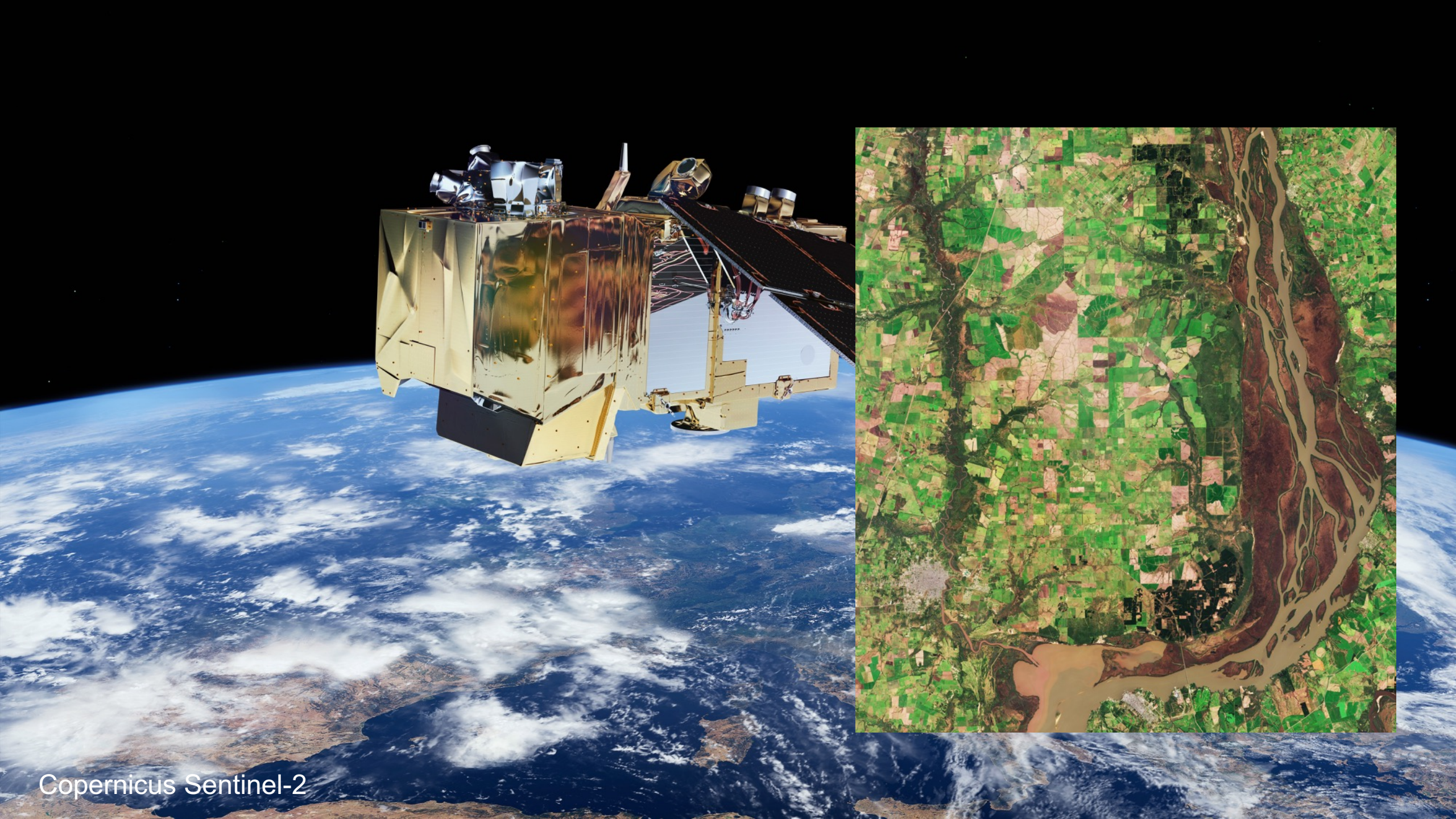
Blockchain

# Internet of things



# Sustainable agriculture with location intelligence





Copernicus Sentinel-2

IMG  
Satelite, Drones

SHP  
Shapefile ESRI

IOT  
Machinery and Sensors

CLIMA  
Weather extended forecast

FORMS  
Scouting Text + IMG




# Spotting Giant Hogweed – by Drone!

Project Hedensted 7328/7328  
Photo #26 Date

Reviewed by: XGA\_DEV Status: Reviewed  
Hodge Weed: Detection Review Date: 18-11-2018

Save

[Previous](#) [Next](#) [Next Non Classified Photo](#)



## A more proactive approach to machine maintenance



**SAP**  
Akıllı Teknoloji



SAP



# A more proactive approach to maintenance



Connected sensors



SAP HANA



Machine Learning



User interfaces

Overview

### Repair Cost

# 634.01 Million

RepairCostNew (RepairCost)

# 148.00

NrRepair (NumberRepairs)

### Evolution



### Down Time

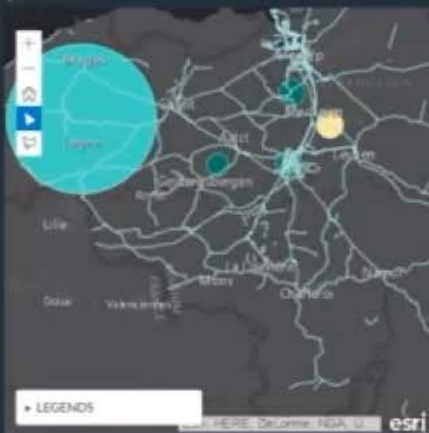
# 33,102.00

DaysSinceSvc

# 3,368.00

UnplannedDowntime

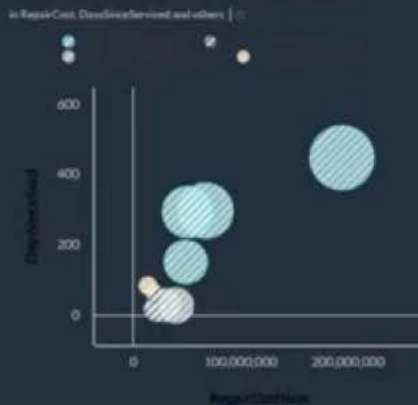
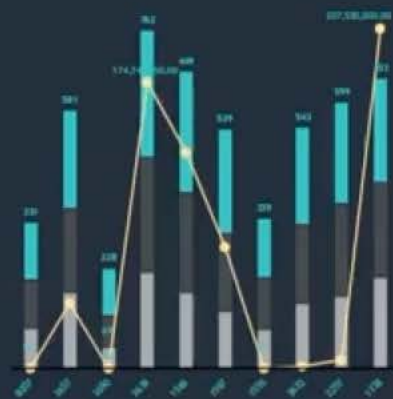
### Repair Centers



#### Content



#### Context





TAKACHI

SCANIA

UITZONDERLIJK VERVOER

1-PNJ-437

SCANIA

SCANIA

89040

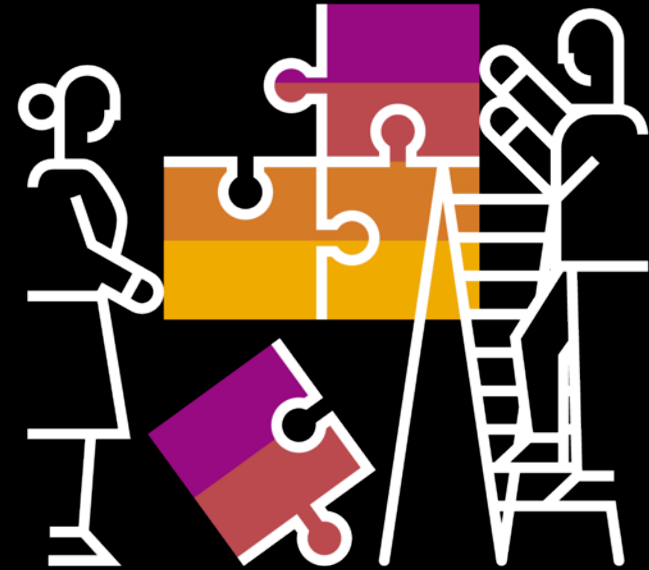
3000

D 480

# Formula E








# New business models



A close-up, monochromatic image of a human eye, tinted in a deep cyan/blue. The eye is looking directly forward. A bright, glowing green ring is superimposed over the pupil and iris area. The text "Light..." is written in a white, sans-serif font, centered over the green ring. The background is a solid, dark cyan color.

Light...



 HTC42 Philips	 HTC43 ASML	 HTC45 vacant	 HTC46 NXP	 HTC48 Signify
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SUBSCRIPTIONS

39

DETAILS

REPORTING



BILLS

€ 4027.40

DETAILS

with an overview of light costs per building, per floor and per room.

# Mobility services

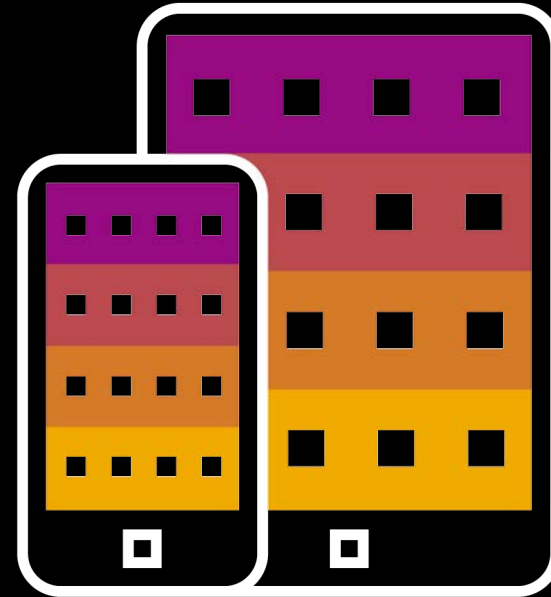


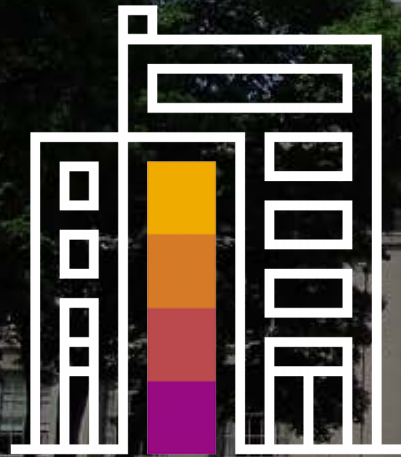
**ANALYTICS**  
PROFESSIONAL & INCLUSIVE  
ANALYTICS LEARNING SOLUTIONS  
ON SAP PERIOD





# Mobile Experiences





Facilities

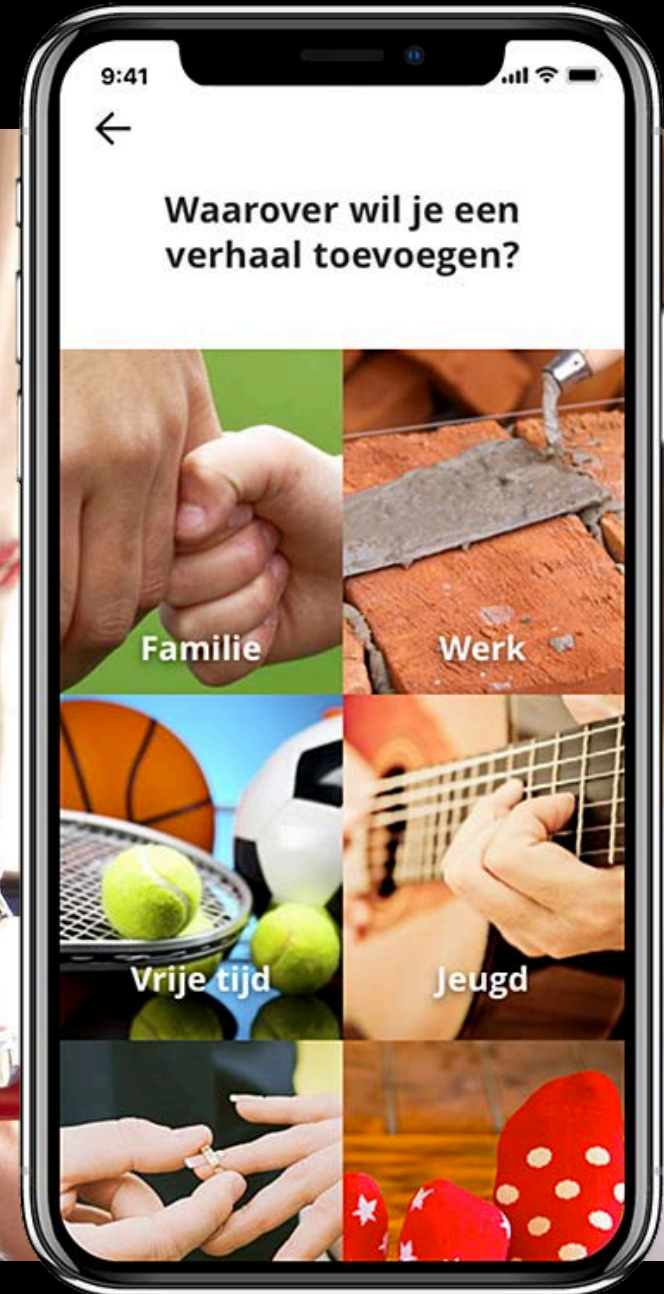
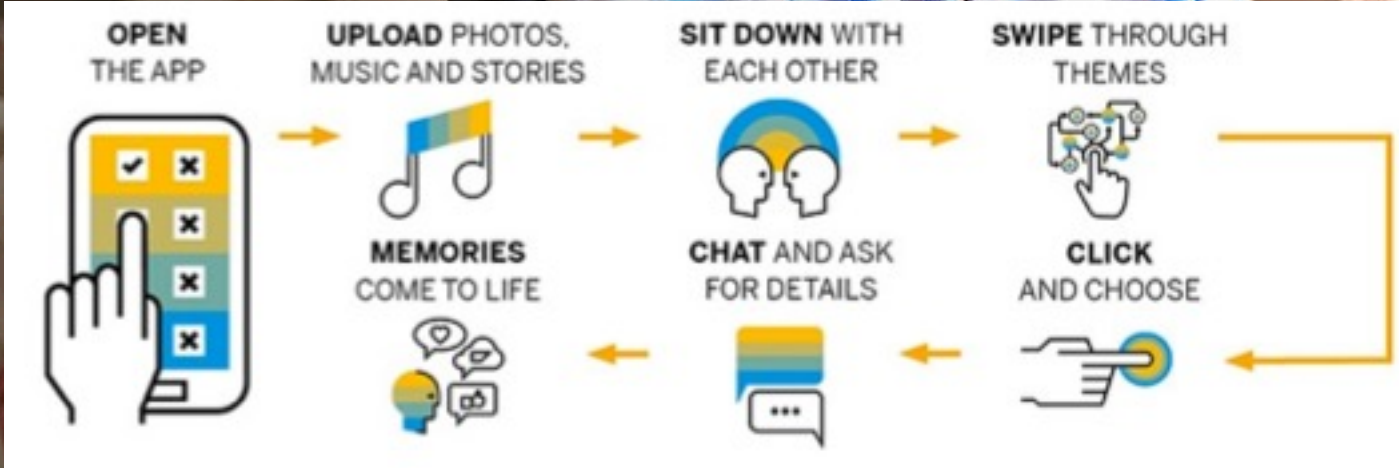


Graduate funding



Campus parking

“That is me!”



Transport Bot - SNCF Transilien

Active on Messenger



Transport Bot - SNCF Transilien

208 people like this

Fictional character



Transport Bot - SNCF Transilien

Active on Messenger



Options



Search in Conversation

Leave feedback

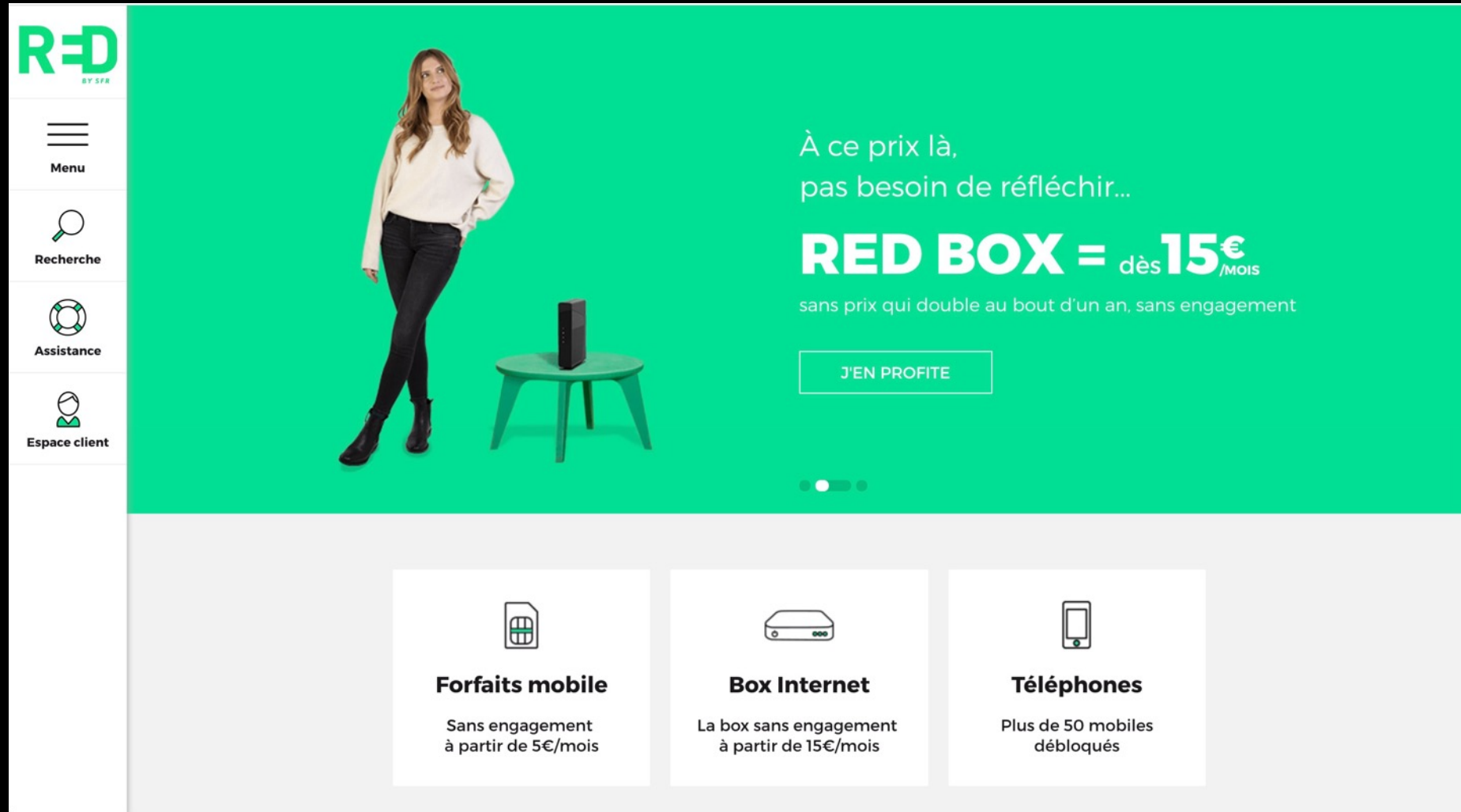


Notifications

When you tap Get Started, Transport Bot - SNCF Transilien will see your public info.

Get Started

# SFR bot



**R=D**  
BY SFR

Menu

Recherche

Assistance

Espace client

À ce prix là,  
pas besoin de réfléchir...

**RED BOX =** dès **15€**  
/MOIS

sans prix qui double au bout d'un an, sans engagement

J'EN PROFITE

**Forfaits mobile**  
Sans engagement  
à partir de 5€/mois

**Box Internet**  
La box sans engagement  
à partir de 15€/mois

**Téléphones**  
Plus de 50 mobiles  
débloqués

Fully manages  
22% of all  
customer  
requests, with  
increased  
customer  
satisfaction

# Analytics and Predictive



# Parkland

Situational awareness  
where it's needed most



# Emergency room grease board

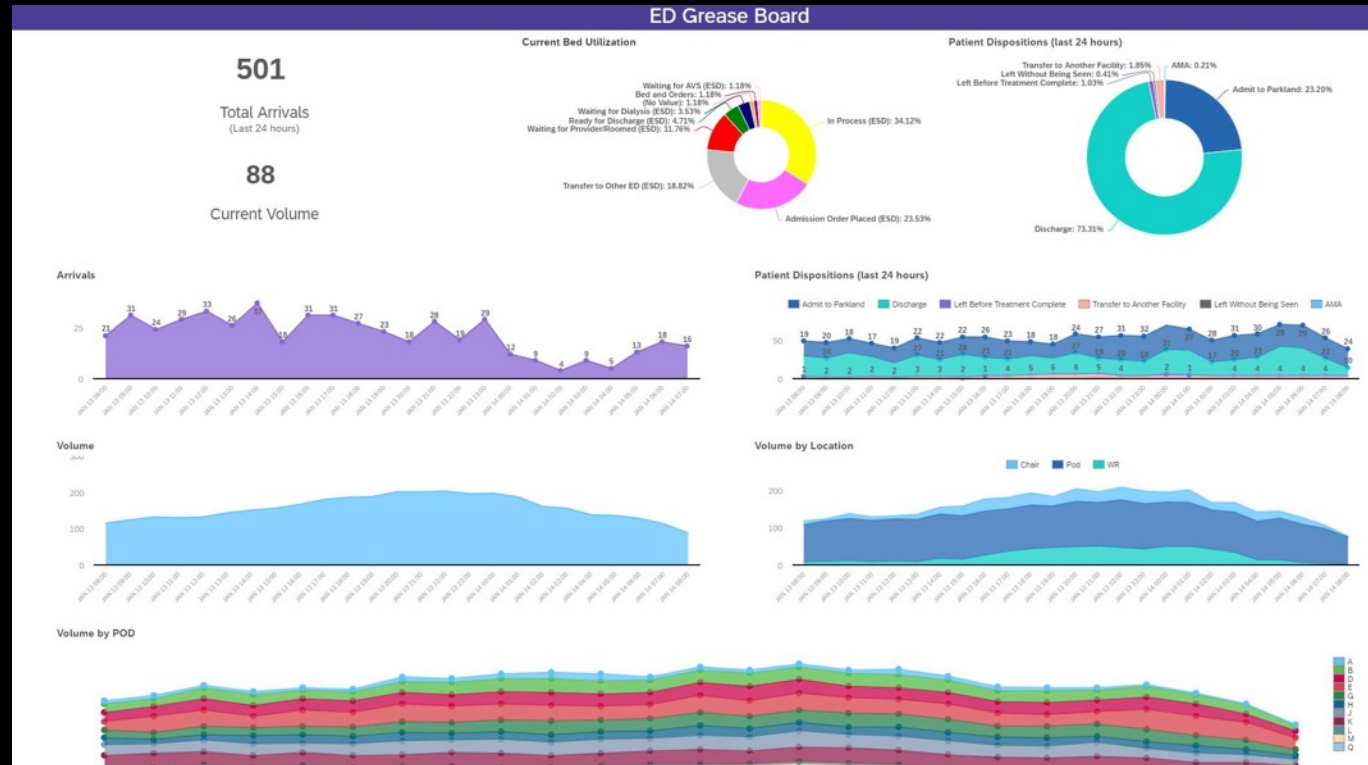
## Snapshot of the new live emergency room grease board

Current Bed Utilization

Current ED Status

Arrivals and Volume

Trending Information  
Distribution of ER  
Patients to PODS



24 hour ED Disposition Summary

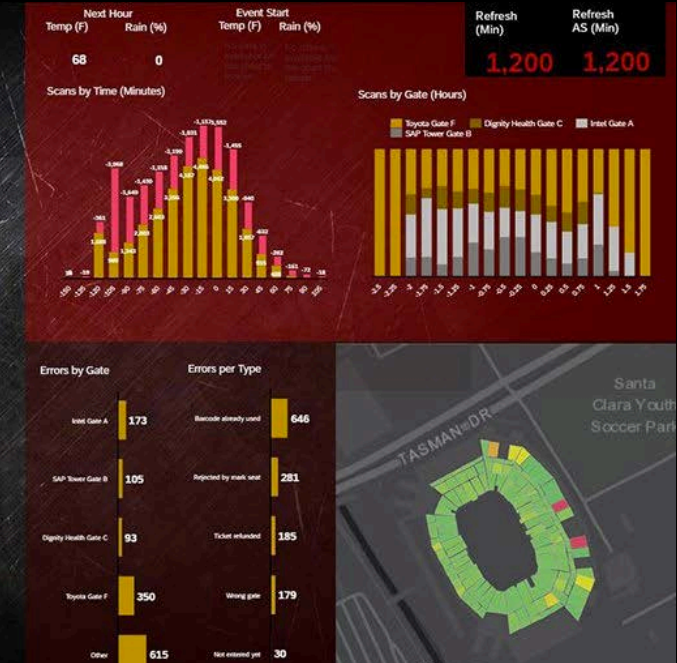
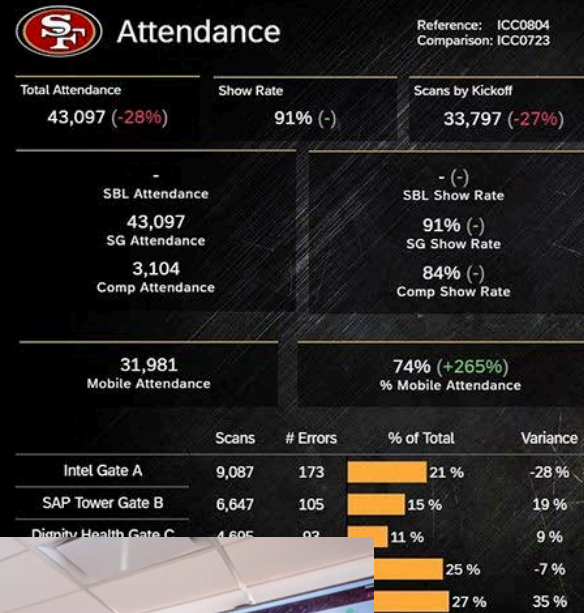
Discharge Disposition Trending

Volume sliced by Location

Automatically refreshes the data every 3 minutes showing near real-time data



# Real-time stadium experiences







# Real-time data de-identification through “differential privacy”

## Original Data - GDPR Risk

Original Data  
in USD 1

						ACCOUNT	Expend
AGE	PERS...	EXPENSE ...	GENDER	REGION	TRANSACTION DATE	TRANSACTION TIME	
> <25	00180...	food_in...	Female	NORAM	2017-03-11 (2017)	17:37:05	8.53
					2017-03-31 (2017)	18:29:23	16.92
		food_ou...	Female	NORAM	2017-03-09 (2017)	22:11:22	18.46
					2017-03-09 (2017)	23:55:05	16.67
					2017-03-10 (2017)	15:37:13	9.44
	003d3...	food_ou...	Male	NORAM	2017-03-16 (2017)	17:11:44	142.16
	0040b...	food_ou...	Male	NORAM	2017-03-17 (2017)	22:43:14	5.04
	00941...	food_in...	Female	NORAM	2017-03-07 (2017)	15:40:43	16.60
					2017-03-23 (2017)	20:44:39	21.89
		food_ou...	Female	NORAM	2017-03-09 (2017)	17:54:50	27.42
					2017-03-20 (2017)	17:03:04	7.47
	0099a...	food_ou...	Male	NORAM	2017-03-07 (2017)	19:18:27	160.82
	00b71...	food_ou...	Female	NORAM	2017-03-02 (2017)	04:18:11	128.68
	013e5...	food_in...	Male	NORAM	2017-03-07 (2017)	13:53:07	7.13
					2017-03-17 (2017)	12:29:49	12.56
					2017-03-22 (2017)	14:53:19	3.52

## SAP HANA Real-time Data Anonymization

Anonymized Data  
in USD 1

						ACCOUNT	Expend
AGE	PERSON ID	EXPENSE T...	GENDER	REGION	TRANSACTION DATE	TRANSACTION TIME	
< 25	00180826-5...	food_inside	Female	NORAM	2017-03-11 (2017)	17:37:05	-672.86
					2017-03-31 (2017)	18:29:23	-1,397.76
		food_outsi...	Female	NORAM	2017-03-09 (2017)	22:11:22	107.81
					2017-03-09 (2017)	23:55:05	2,317.08
					2017-03-10 (2017)	15:37:13	635.59
	003d325f-0a...	food_outsi...	Male	NORAM	2017-03-16 (2017)	17:11:44	-2,001.30
	0040bc4f-c4...	food_outsi...	Male	NORAM	2017-03-17 (2017)	22:43:14	1,540.00
	009410d2-9f...	food_inside	Female	NORAM	2017-03-07 (2017)	15:40:43	263.66
					2017-03-23 (2017)	20:44:39	1,849.41
		food_outsi...	Female	NORAM	2017-03-09 (2017)	17:54:50	485.74
					2017-03-20 (2017)	17:03:04	-2,253.09
	0099a72d-1...	food_outsi...	Male	NORAM	2017-03-07 (2017)	19:18:27	-4,583.14
	00b71c8a-fd...	food_outsi...	Female	NORAM	2017-03-02 (2017)	04:18:11	-8,852.43
	013e5324-5...	food_inside	Male	NORAM	2017-03-07 (2017)	13:53:07	-186.32
					2017-03-17 (2017)	12:29:49	4,085.26
					2017-03-22 (2017)	14:53:19	-261.17

Added "noise"

# De-identified results very close to the original ( $\Delta < 5\%$ )

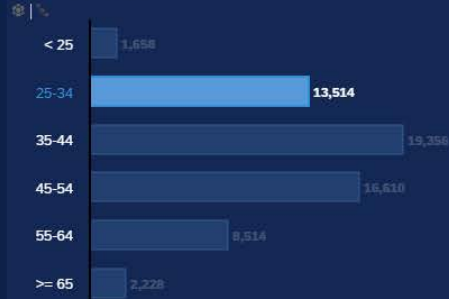
Original Data - GDPR Risk

Before anonymization

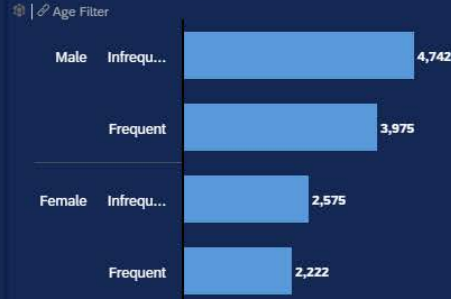
Drill



Persons per Age

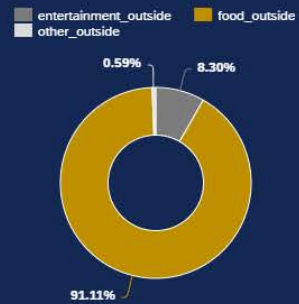


Persons per Frequent Flyer and Gender

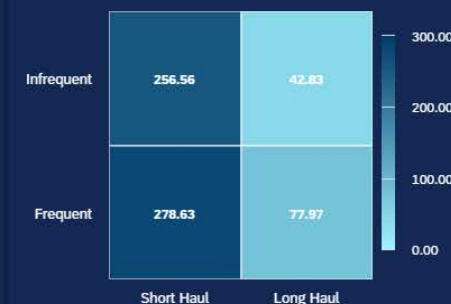


Insights

Expend per Expense Type  
in USD



Expend per Frequent Flyer and Travel Type  
in Thousand USD



SAP HANA

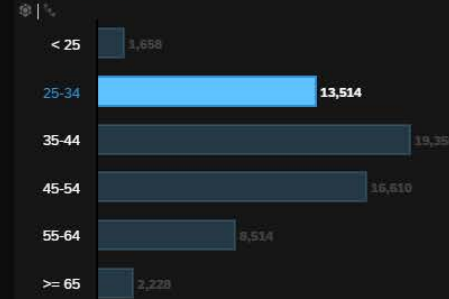
Real-time Data Anonymization

After anonymization

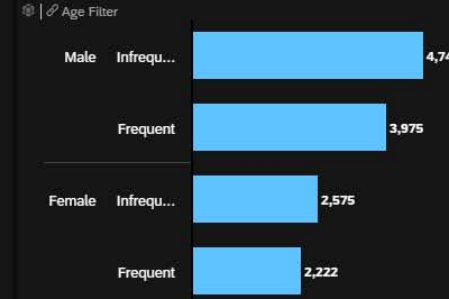
Drill



Persons per Age

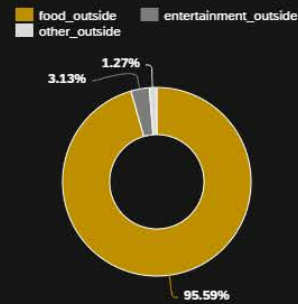


Persons per Frequent Flyer and Gender

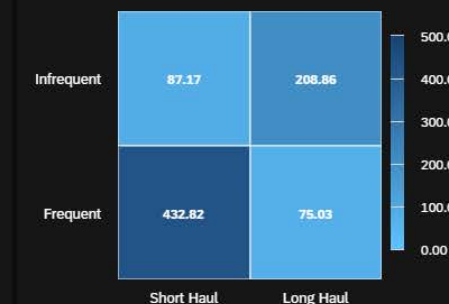


Insights

Expend per Expense Type for Actual  
in USD



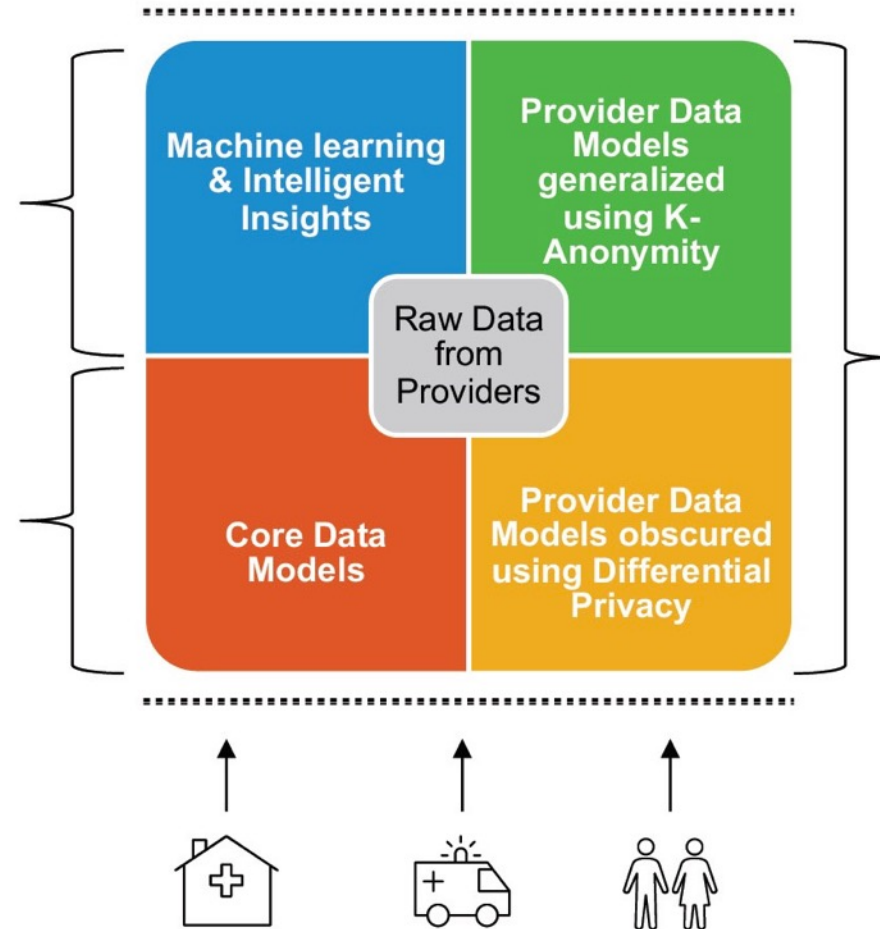
Expend per Frequent Flyer and Travel Type  
in Thousand USD



# “Embrace privacy by design”

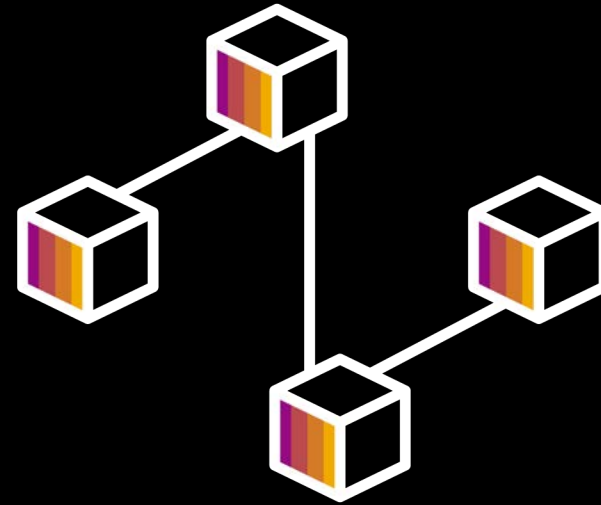


- Meaningful Insights**
  - Discovery of key influencers and relationships
  - Association of influencers to higher levels of care
- Harmonized Data**
  - Establishment of one semantic meaning across multiple providers
  - One data dictionary definition
  - Basic security and data masking



- Anonymized Data**
  - Generalize personally identifiable attributes
  - Obfuscate key figures while maintaining statistical relevance
  - Adherence to privacy regulations

# Blockchain





# FROM OCEAN TO TABLE

WITH SAP INTELLIGENT TECHNOLOGIES





# The Intelligent Enterprise: Examples from the Front Lines

Internet of things

New business models

Mobile experiences

Analytics and predictive

Blockchain



[www.sap.com/innovationawards](http://www.sap.com/innovationawards)





A low-angle shot of a dense forest with tall, slender trees reaching towards a bright sky. Sunlight filters through the green canopy, creating a dappled light effect on the forest floor. The ground is covered with vibrant green ferns and moss. The overall atmosphere is serene and natural.

**win / win / win**

**Profits AND purpose**

**Now more than ever, being the best  
means making a difference**

**The best-run businesses  
make the world run better**



# Thank you!

Timo Elliott

[timo.elliott@sap.com](mailto:timo.elliott@sap.com)

[@timoelliott](#)

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session evaluation on the  
SAPPHIRE NOW and ASUG  
Annual Conference mobile  
app.





# Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

<http://info.asug.com/2019-ac-slides>

# Q&A

For questions after this session, contact me at [timo.elliott@sap.com](mailto:timo.elliott@sap.com)

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