



{open} :hack

tmforum | connecting digital ecosystems

May 14-16, 2017 • Nice, France

The Challenge!

Bringing Innovation to Life on a Telco
based Platform of Innovation

Joann O'Brien, VP APIs & Ecosystems, TM Forum

Lester Thomas, Chief IT Systems Architect, Vodafone

Abhi Sur, Director of Communications, Salesforce

Tarik den Boer, Solution Engineer, Salesforce

Yiling(Sammy) Liu, Manager APIs, Huawei

Pierre Gauthier, Chief API Architect, TM Forum

TM Forum is the global member association for digital business, enabling members across a wide range of industries to connect, collaborate and partner to build, deliver, and monetize innovative digital services.

25+ Years Enabling Collaborative Innovation

80,000+ Member Professionals

800+ Member Companies
180+ Service Providers in 56 countries, revenues of more than \$1Trillion

Global Coverage



Sample of TM Forum's 900+ Member Companies

TM Forum's Open APIs are an integral part of TM Forum's strategy to accelerate transformation of the communications industry. Our Open APIs enable CSPs and their partners to:

- **Deliver Digital Business Agility**
 - Through a consistent platform approach to IT capabilities based on common APIs,
 - Simplify and streamline operations, enabling devops agility by simplifying fixed integration points
- **Rapidly Innovate, Create, Build and Manage Digital Ecosystem Services with Partners**
 - Ability to innovate, partner and interoperate complex digital services in partnership more easily
 - Partner ecosystem curation, orchestration and end-to-end management of complex digital services
 - Open APIs can be used to enable federation of services with other operators to compete with OTTs

Open API Manifesto signed by 9 major CSP groups in May 2016:



Now signed by 10+ leading vendors, including:



Bringing together the critical elements to enabling open digital ecosystems

{open}:data + {open}:apis + {open}:platform



Outline Agenda

SUNDAY, MAY 14TH

- ✓ 2:00pm – 5:00pm Open Hack Training
- ✓ 5:00pm – 5:30pm Drinks Reception

MONDAY, MAY 15TH

- ✓ 9:00am – 8:00pm Hacking

TUESDAY, MAY 16TH

- ✓ 9:00am – 2:00pm Hacking & Pitch Preparation
- ✓ 9:00am – 10:45am TM Forum Live Keynotes
- ✓ 3:00pm – 4:30pm Pitches
- ✓ 4:30pm – 5:00pm Judge Deliberation
- ✓ 5:15pm Winner announcement

- Team Register & submit idea & design in Devpost by 1pm Monday
- Final submission to Devpost by 2pm Tuesday

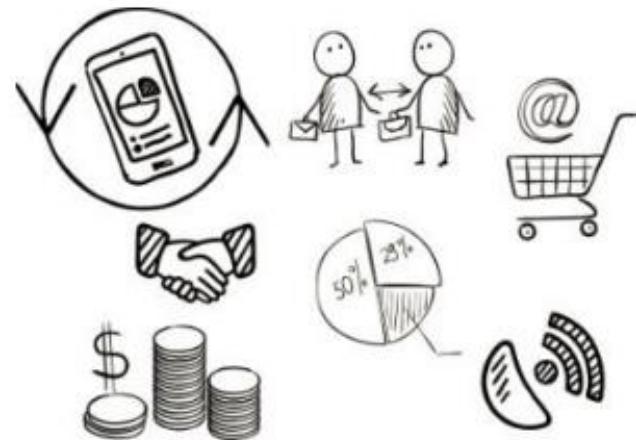
CHALLENGES



IoT/Smart City



Network as a Service



Connected Experience



Open Data and
Now Software-defined
Network APIs
+
Customer, Product,
Revenue and
Messaging APIs
+
Developers,
enthusiasm,
coffee and pizza

Dynamic on-demand
services that enhance
citizens lives

=

Ability to monetize
services



Open Hack Lisbon winners: **Parking Share**



Connecting drivers with parking spaces

Searching for a parking space is a routine and often frustrating activity. This search burns about one million barrels of the world's oil every day.

ParkingShare used TM Forum Customer, Product, Messaging and Charging APIs together with Lisbon Open Data to create an online marketplace. Leveraging the 'sharing economy' this connects drivers with city parking: Enables people to list their available parking and earn extra income in the form of rent as well as providing a valuable resource to drivers.

Salesforce Enablement for TM Forum Hackathon Participants

{open}hack - 14-16 May 2017- Nice - France

Tarik den Boer
Lead Solutions Engineer – Salesforce EMEA

Abhi Sur
Director, Communications Industry Business Unit



Introduction

Salesforce Platform for Hackathon

We've Built the World's Leading Business Apps

On the world's most powerful enterprise platform



Sales Cloud



Service Cloud



Marketing Cloud



Community Cloud



Analytics Cloud



App Cloud



Commerce Cloud



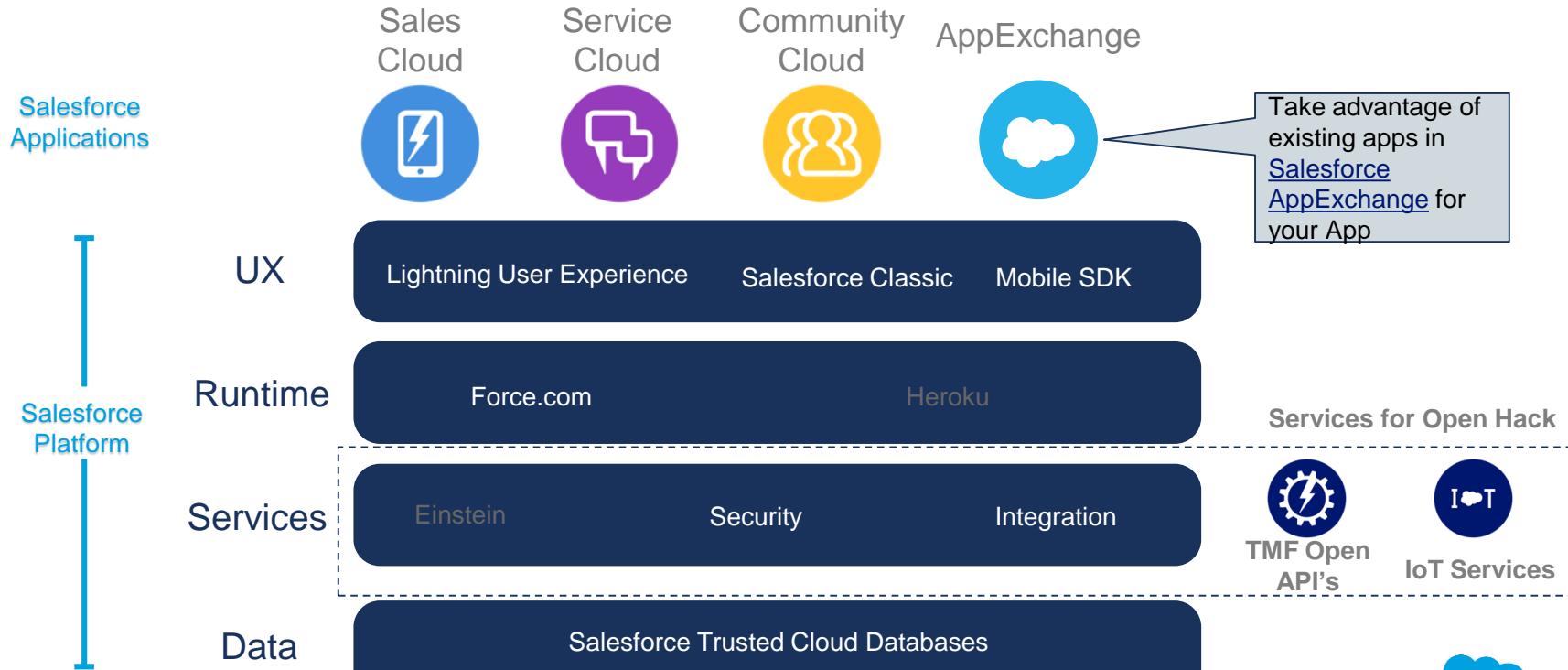
IoT Cloud

8 Industry Leading Apps | 1 Platform



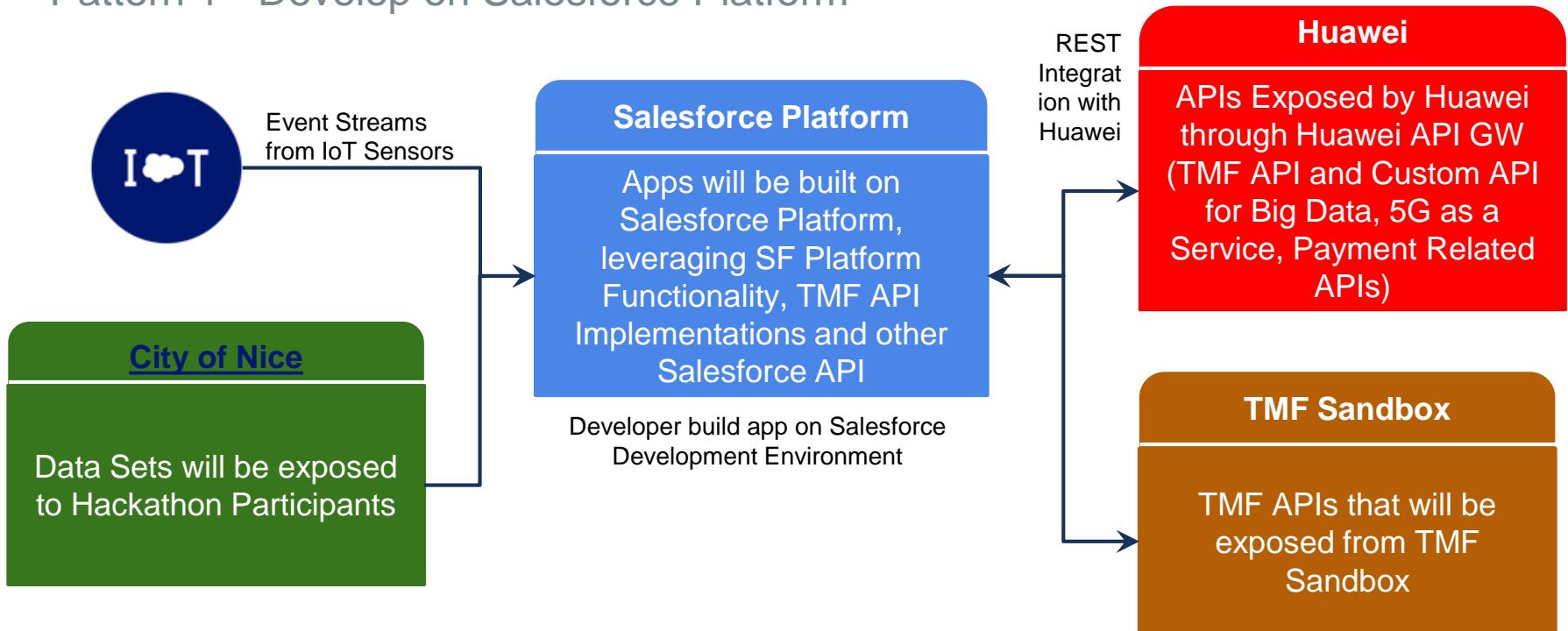
Salesforce Platform and Technology

Exposed for Hackathon at TMF Live, Nice 2017



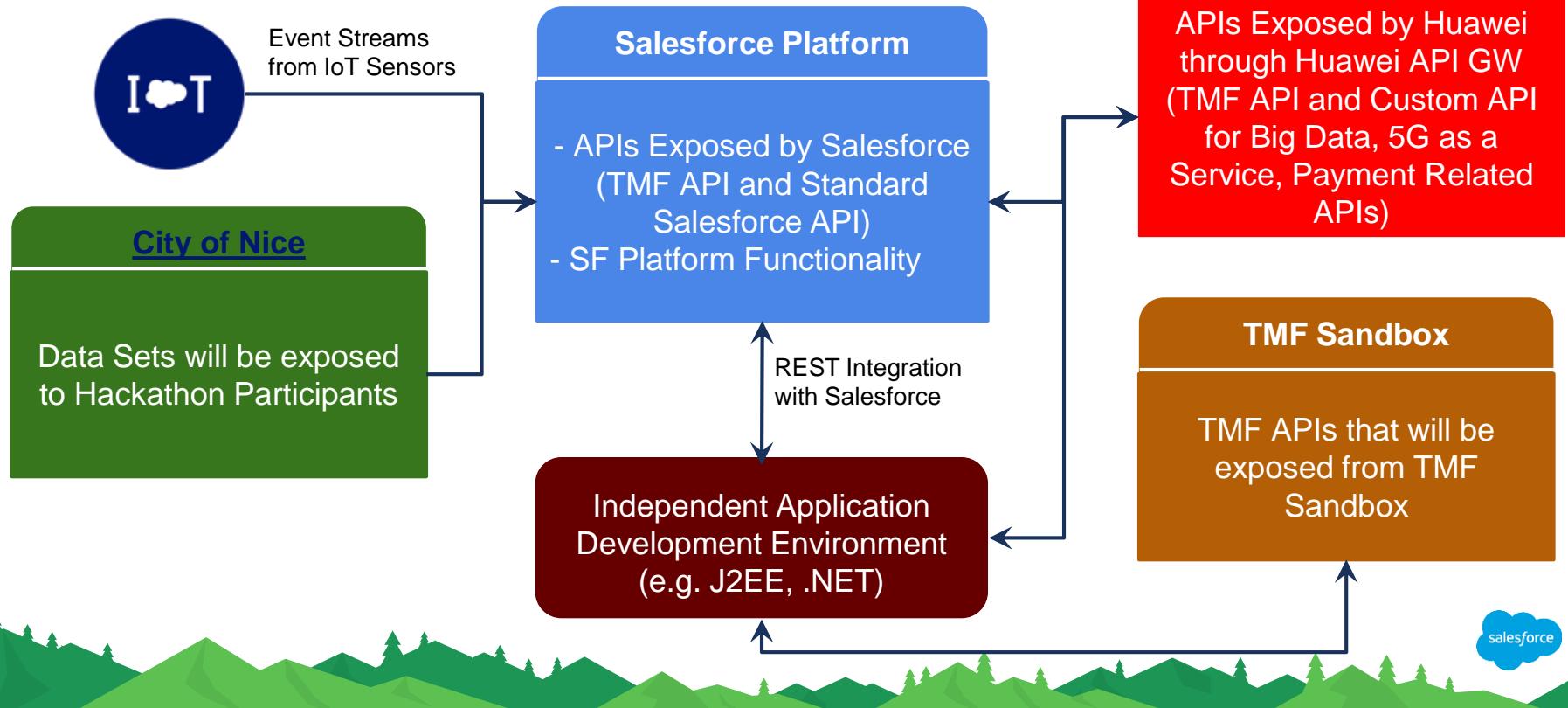
Putting it All Together

Pattern 1 - Develop on Salesforce Platform



Putting it All Together

Pattern 2 - Develop on Independent DE



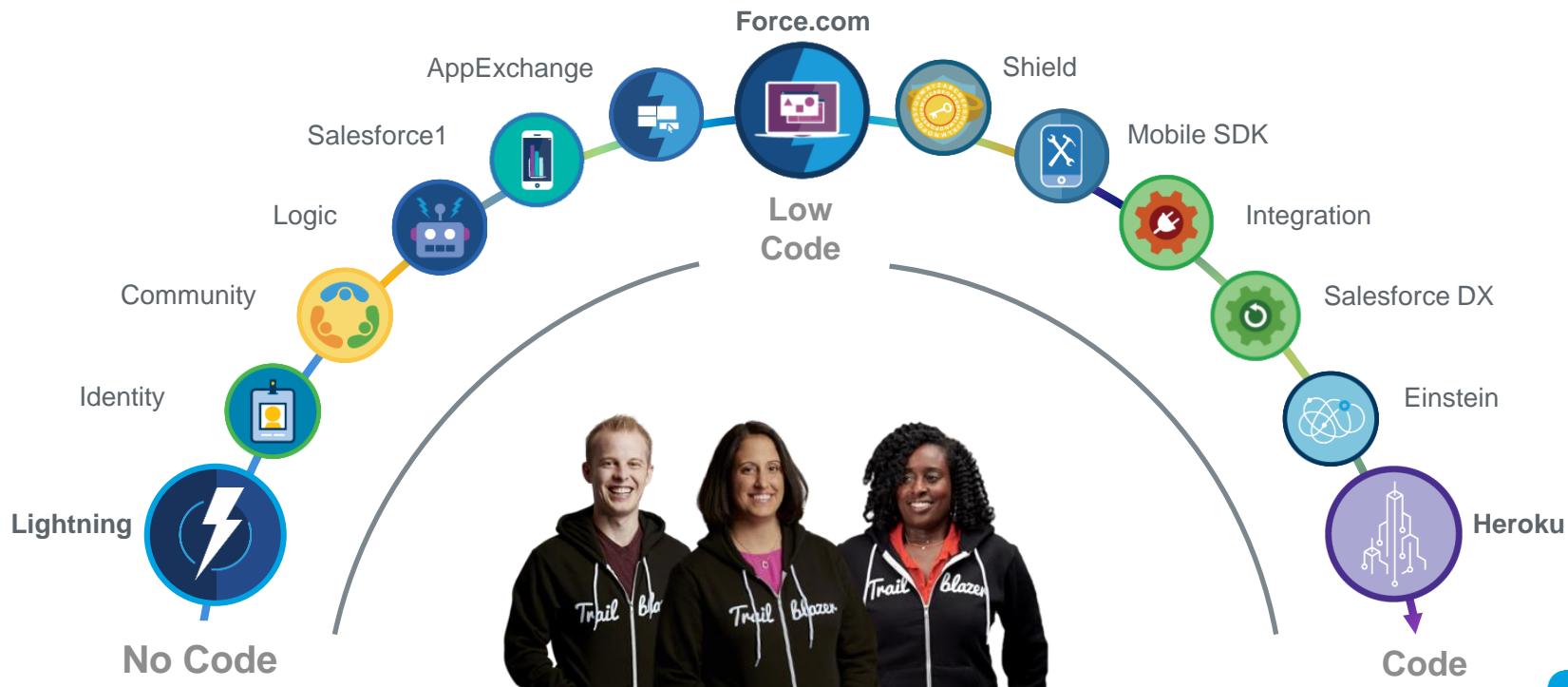
Enablement for Hackathon Participants

Trail of Trails



Build Apps with Every Skillset

Empower developers, admins and business users to build the way they want



Roles We Expect in an {open}:hack Team



Business Analyst Role

Developer Role



Admin Role

Three Areas of Enablement

Soft Skills:



- Get your idea to 'hack'
- Innovation Solution
- Pitch of your idea
- Businesscase
- UX research
- Storytelling

Developer Skills:



- Where to start as a developer
- Decide when to configure and when to code
- Salesforce Developer console and IDE
- Intro to Apex and Visualforce
- Lightning components
- Lightning design system
- Mobile SDK

Platform Skills:



- Getting to know the Salesforce platform
- Learn how to do declarative changes
- Data management
- Decide when to configure and when to code
- Workflow and business processes
- Lightning Apps
- Salesforce1 Mobile app



Salesforce Developer Resources

Get your hands on resources and help

Register yourself at developer.salesforce.com

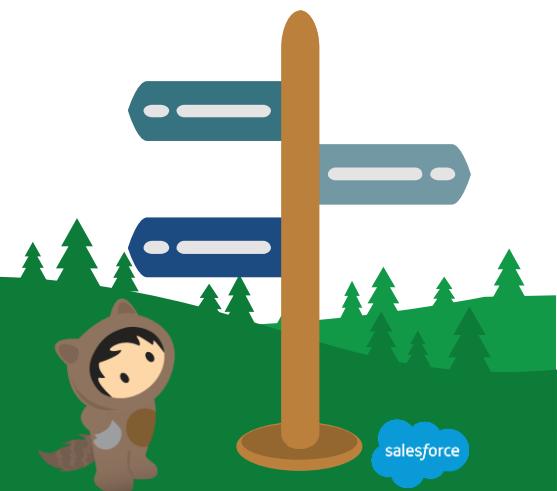


Salesforce Developer Resources

As a registered Salesforce developer you have access to:

- Your own development Salesforce Instance*
a playground with 2 CRM and 3 full license FORCE.com users
- Access to Training on Trailhead
Interactive and fun free online training platform
- Access to Developer Community
3 million developers out there to help
- Access to other material like: videos, tutorials, blog posts, etc.

*(Org. in Salesforce Slang)





Trailhead: A New Learning Model

Fun and easy way to learn the power of the platform

Softskills



Developer Skills



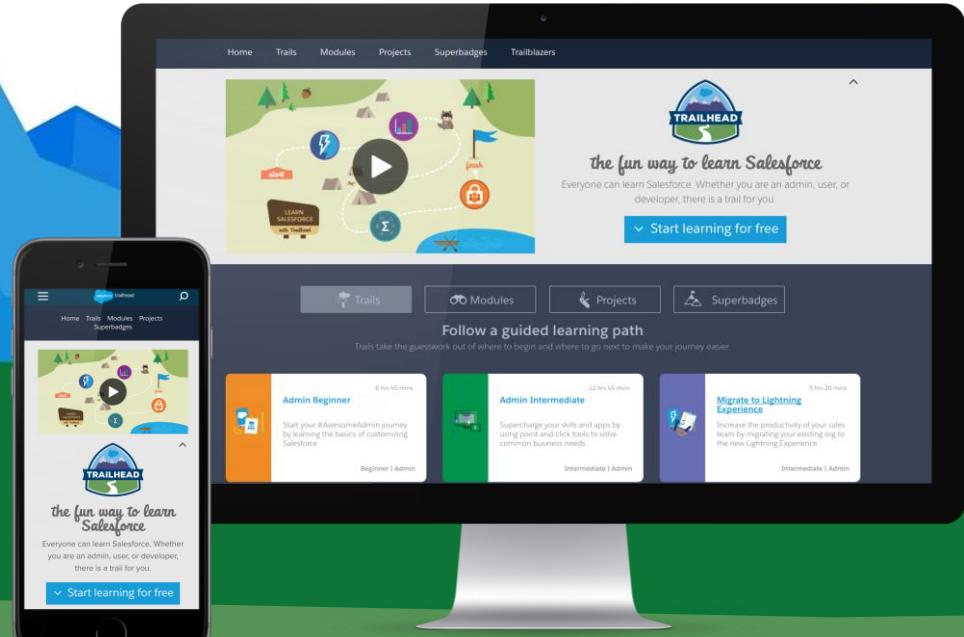
Platform Skills



1M+ Badges completed

144 Badges available

Visit trailhead.salesforce.com
and get started today





Trailhead: A New Learning Model

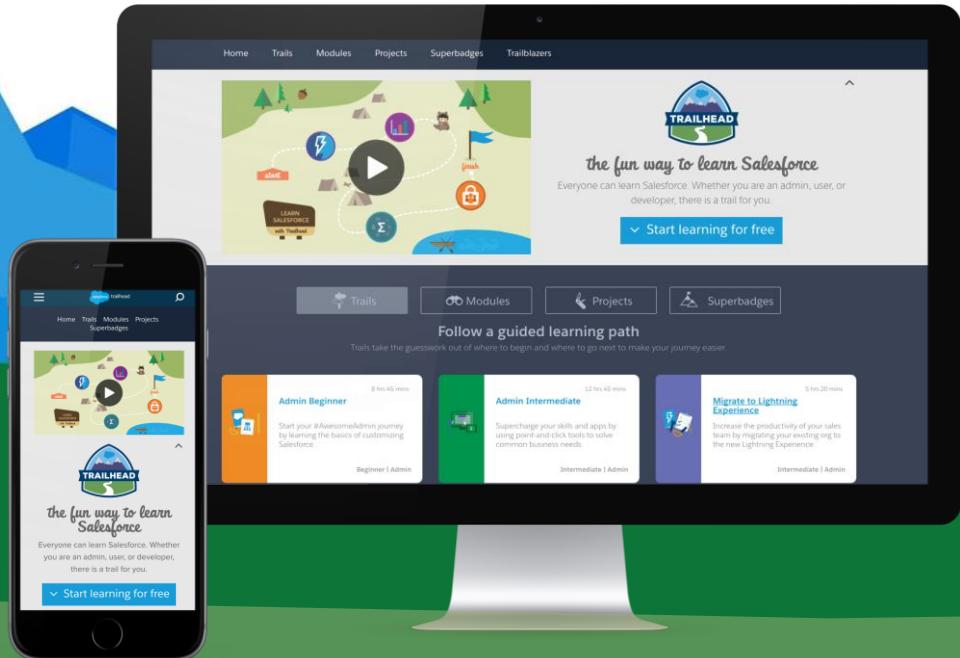
Fun and easy way to learn the power of the platform

List of trails and resources for
`{open}:/hack enablement:`

TM Forum `open:{hack}` confluence
page:
<http://bit.ly/2pms8Bp>

OR direct to list of material and
resources:

<https://salesforce.quip.com/ibB6AqFYIXfu>



1M+ Badges completed

144 Badges available

Visit trailhead.salesforce.com
and get started today



Where to go for {open}:hack specific help

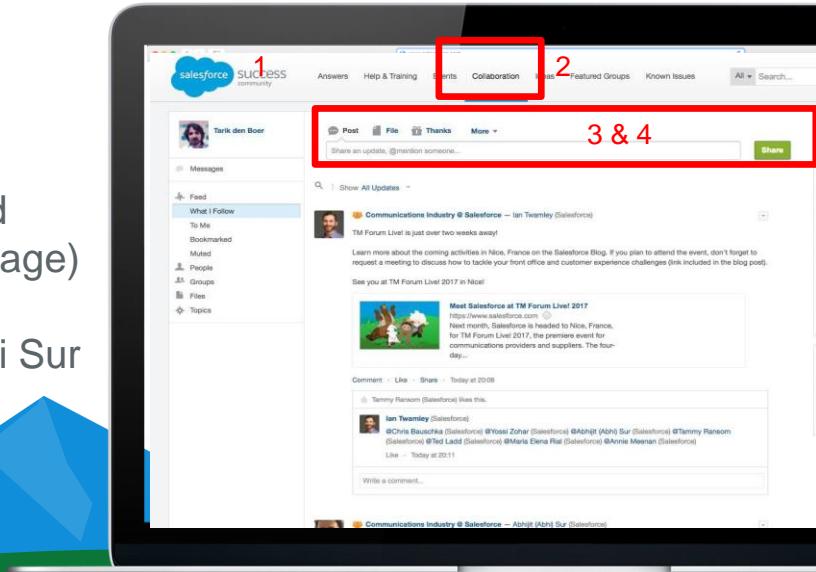
The Salesforce Success Community Communications Industry Chatter Group

1. Join at <https://success.salesforce.com/> (using Salesforce login credentials)

1. Go to Collaboration from the top navigation menu

1. Find the Communications Industry Chatter Group and Join (Click:  in the right top corner of the group page)

1. Post a question and mention Tarik den Boer and Abhi Sur (@Tarik den Boer (Salesforce), @Abhijit (Abhi) Sur (Salesforce))



Idea Clinics

Get your idea validated in advance



What is An Idea Clinic

30 minute web conference session dedicated to your team to discuss your idea. It is your opportunity to ask questions in advance of the {open}:hack event.

An opportunity to discuss the idea with a Salesforce Subject Matter Expert to validate some of the ideas and implementation directions

How To Sign Up

Sign up for your slot at the [Salesforce Success Community Communications Industry Chatter Group](#) and mention Tarik den Boer and Abhi Sur (@Tarik den Boer (Salesforce), @Abhijit (Abhi) Sur (Salesforce) and give indicate what theme (#5G, #IoT or #Connected Experience).

We will follow up with you in response.



IoT Enablement



Hackathon Assets for IoT Track

How To prepare your Salesforce ORG for IoT Track

Explore Virtual Drone plugin -
Pierre to send info to Abhi + Charlie
Joann to send address NJ for
shipment

Event Registration HTML Page

Sensor Field 1

Team Name:
Name: Electric Temp, Value:
Trigger High Value –
Trigger Low Value –
Trigger Equal Value -

Sensor Field 2

Team Name:
Name: Electric Temp, Value:
Trigger High Value –
Trigger Low Value –
Trigger Equal Value -

Event Stream Setup

Event Stream and Standard Orchestration for each sensor is automatically created in IOT Cloud for every team

Create Custom Object in SF Org

A custom object will be built in SF Org for team (through managed package) with fields for each sensor
(A row will be inserted in this object for every trigger match)

Define workflows/triggers

Hackathon Team should configure workflow or create triggers or APEX classes for each row entry





See you in Nice!

May 14 -16, 2017



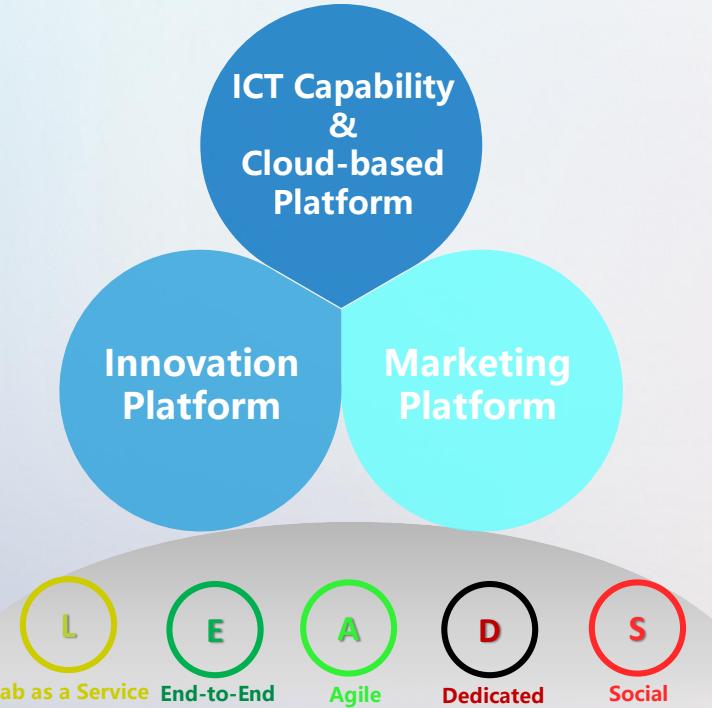
Thank You



Huawei APIs For Open Hack Nice

Huawei Open Hack Nice Team

Build and Integrate worldwide resource to enable fast and dynamic innovation, accelerate the commercial implementation



Progress in 2016:

■ Open Lab Reservation Times **7300+**

■ Online Use of API Explorer **15000+**

■ Online Study of Code Lab **5000+**

■ Open Hacks, **2500+ Teams**, Share **millions**

bonus

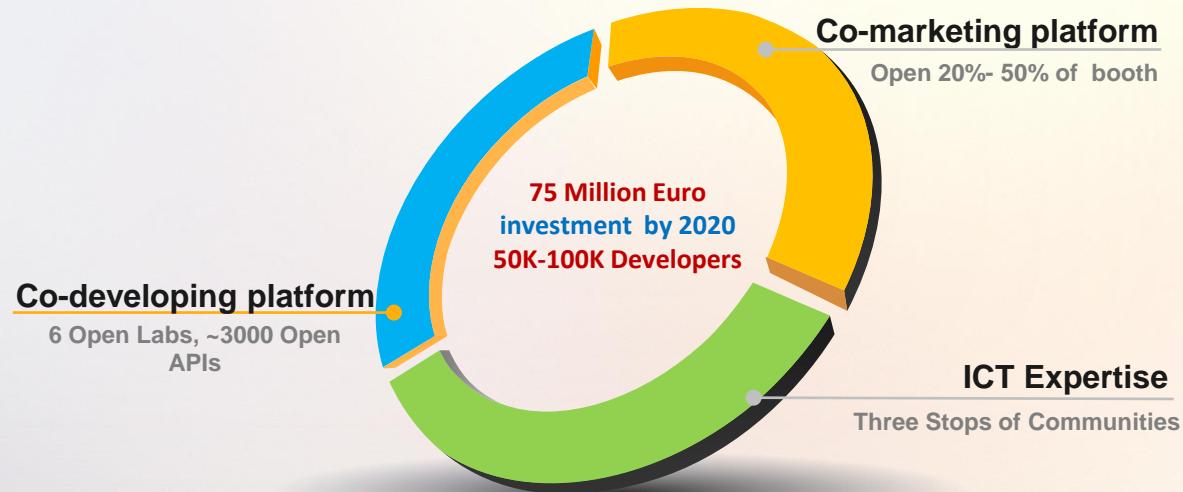


Enabling more rapid innovation and large-scale commercial deployments

Worldwide : Invest 1bn USD in developing the ecosystem

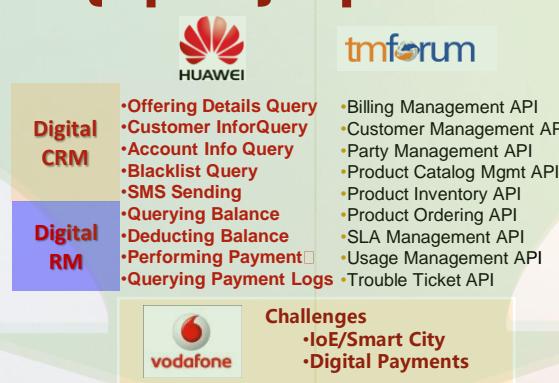


Europe : European Developer Enablement Plan



Open Hack in Lisbon on Feb 6-7, 2017

{open}:data + {open}:apis + {open}:platform



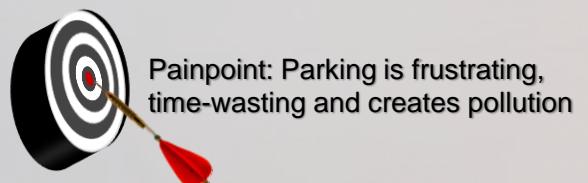
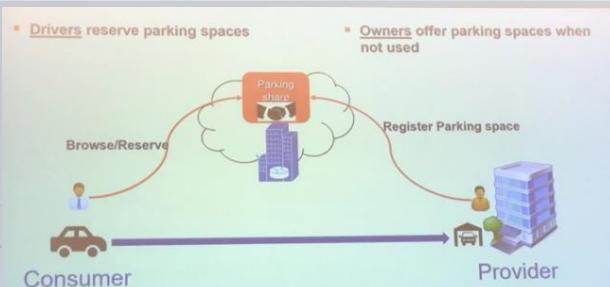
FIWARE Platform for Smart Cities

- Weather
- Air Quality



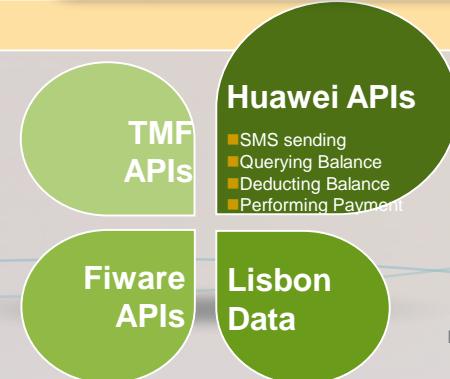
8 teams output 8 innovative ideas

One Example: Share Parking

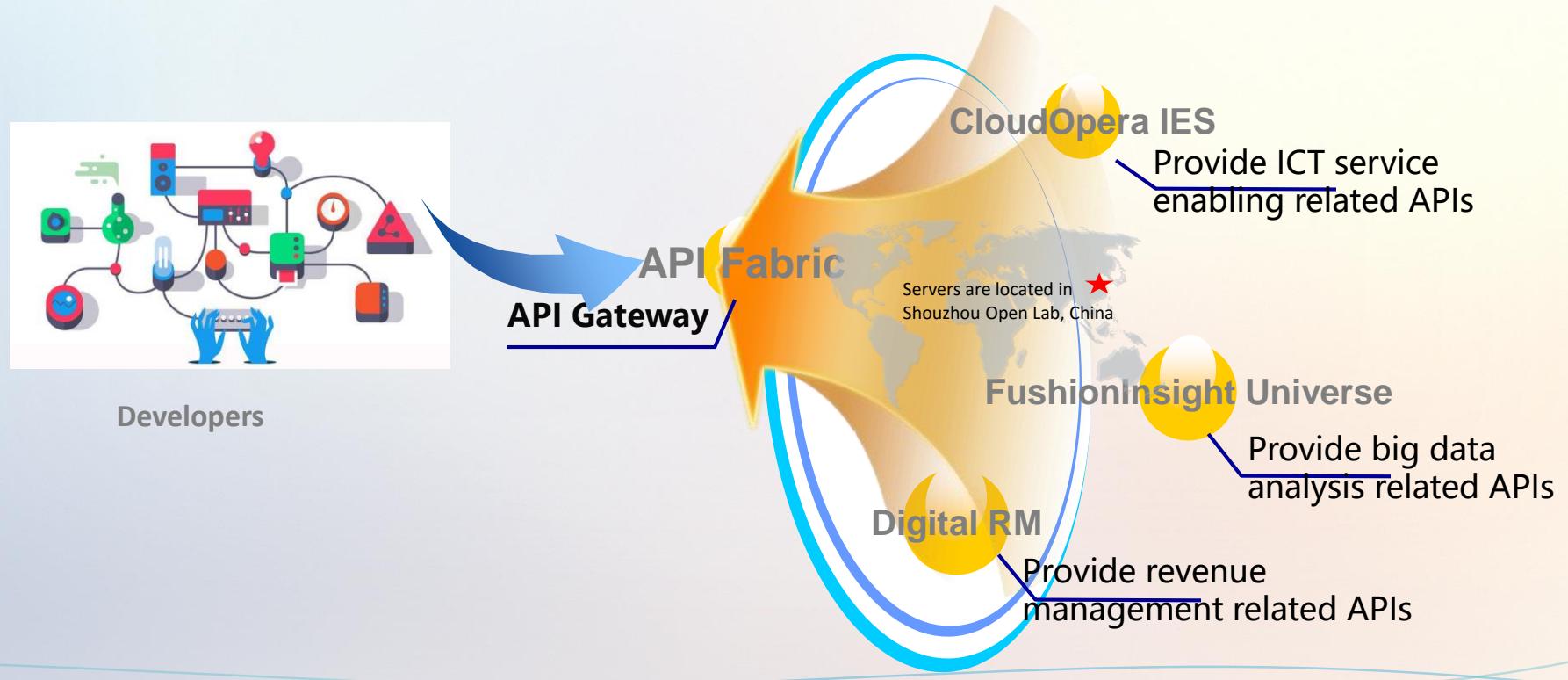


an Airbnb approach to parking

To provide a way for people to hire out their personal parking spaces to drivers.



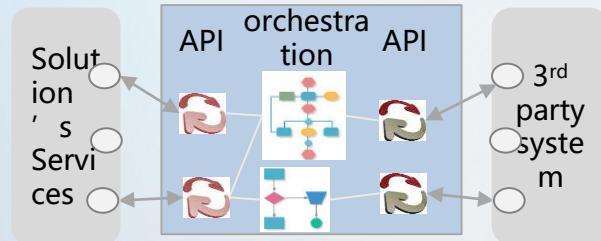
Huawei APIs Exposed Architecture



Huawei API Fabric

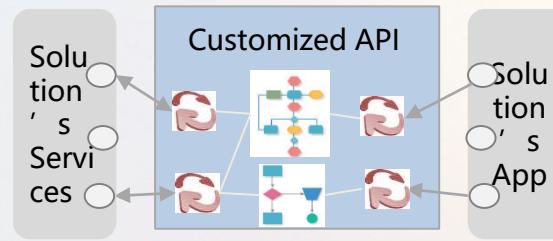
Integrate with 3rd party system

Improve efficiency of solution integrate with 3rd party system



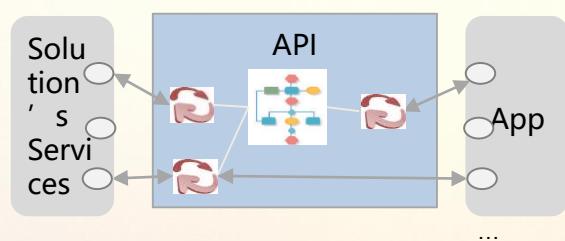
Customized API

SI customizes API base on solution baseline API



Open API

Support solution's Open API



API Fabric

API Tools

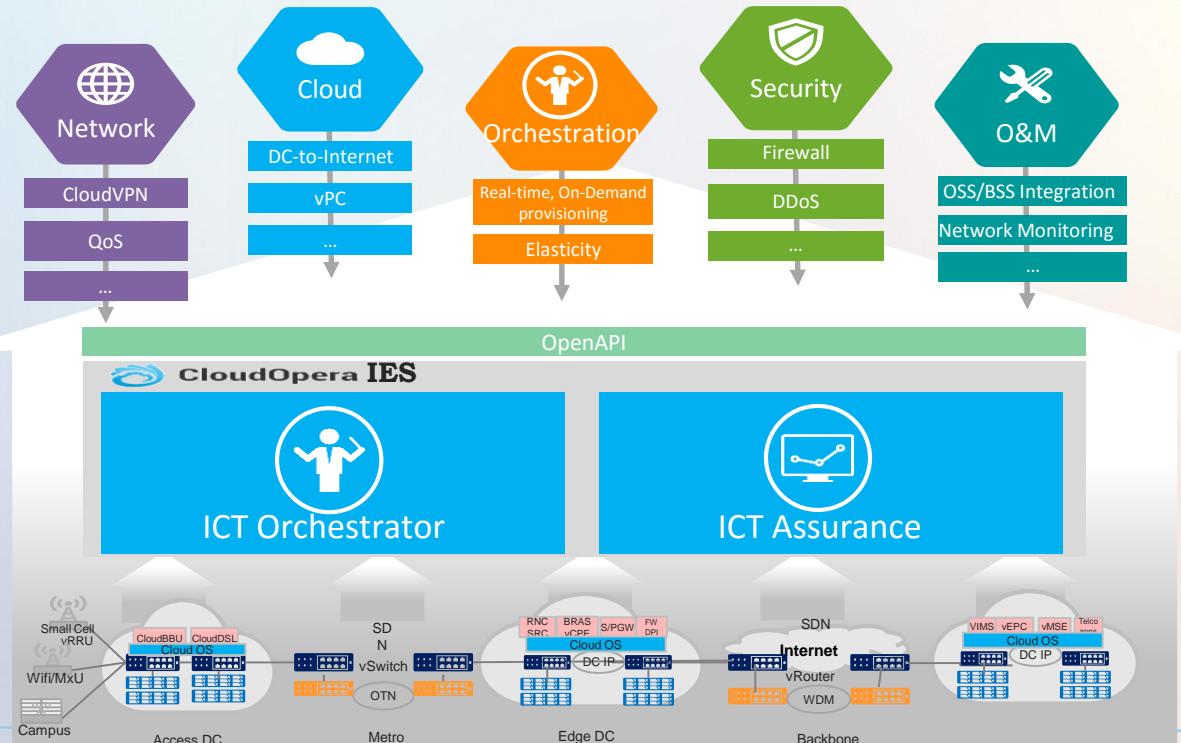
API Gateway

API Orchestration

API Management

API Catalog

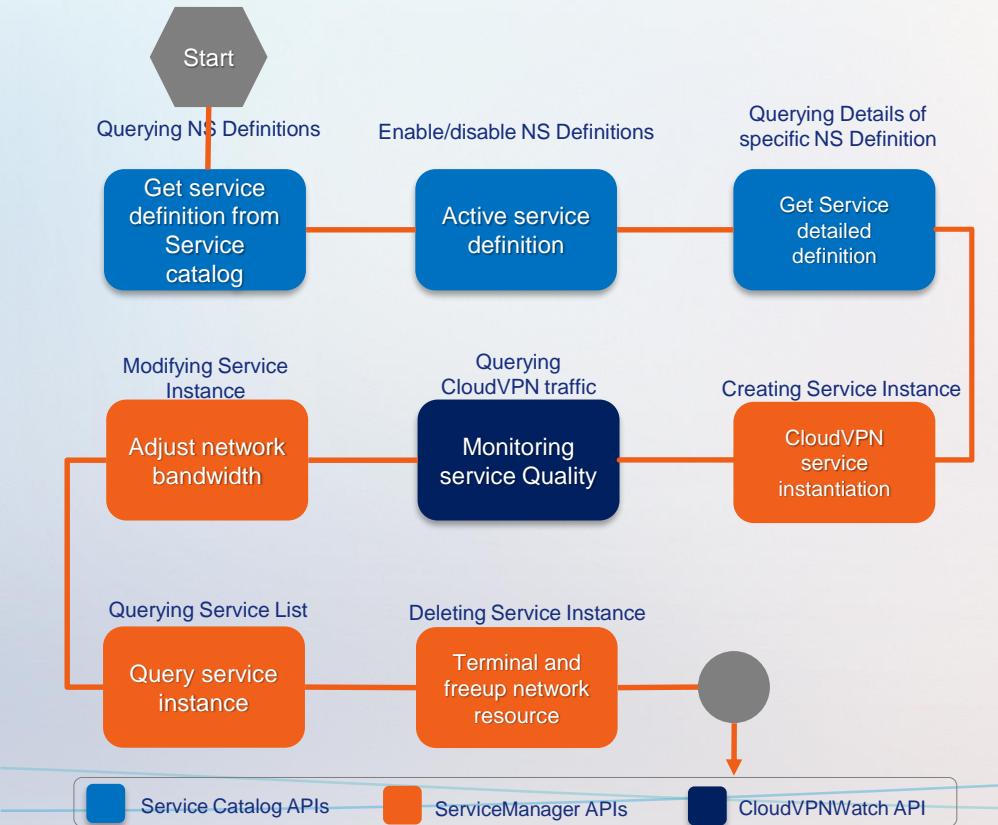
CloudOpera IES –ICT Service Enabling Platform



Benefits for Developers

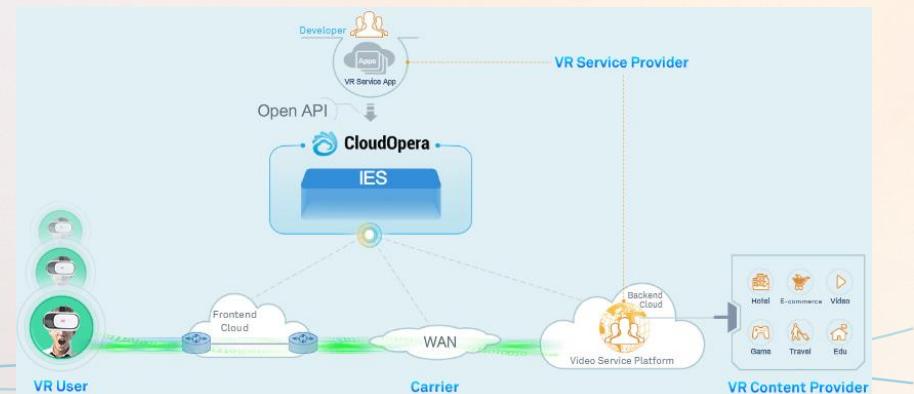
- 1 **Cloudify network infrastructure capability openness to provide richer ICT service availability for industry innovation and insight.**
- 2 **On-demand use, real-time provisioning and elastics adjustment to satisfy user experience.**
- 3 **Open Southbound plugin and northbound service design to support new service fast on-boarding and partner innovation.**

IES APIs for Nice Open Hack



Network acceleration to satisfy VR experience:

1. VR User connects VR application to use.
2. VR application builds network connectivity with 50Mbps between user and server (ServiceManager APIs)
3. VR application will monitor and predict network quality (CloudVPNWatch API) and real-time adjust network bandwidth (ServiceManager APIs)
4. After finished, VR application will free up the network resource. (ServiceManager APIs)



FI-Universe Analytics: Big Data Analytics Platform For Telcos



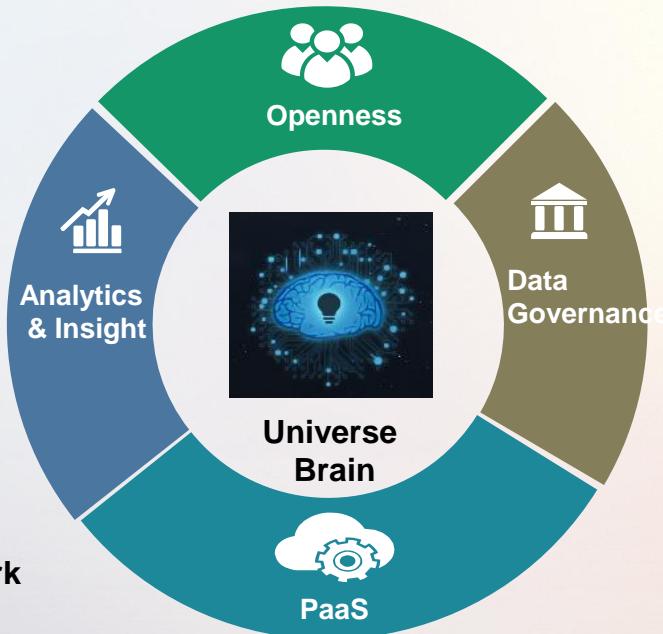
Smart & Precise Marketing



Improve Customer Engagement



Customer Experience Driven Network



Data Service for Vertical Industry



Product Optimization & Innovation



Better Customer Care & Retention

FI-Universe Analytics Open Hack APIs & Use Case

| ID | Category | API Name | Description |
|----|-------------------|---|---|
| 1 | Location Insight | Get City ID | Obtaining the City ID |
| 2 | | Get City Center Coordinate | Obtaining the City Center Coordinate |
| 3 | | Get City Bound Coordinate | Obtaining the City Boundary Coordinate |
| 4 | | Get City Precision | Obtaining the City Grid Precision |
| 5 | | Get City Grid | Obtaining the City Grid Count |
| 6 | | Create Area By Grid | Create Area By Grid |
| 7 | | Get Area Crowd Sum | Obtaining the Person Count in an Area |
| 8 | | Get Area Crowd Sum By Grid | Obtaining the Person Count in an Area by Grid |
| 9 | | Get Area Crowd Sum By Slice | Obtaining the Person Count in an Area by Time Slice |
| 10 | | Get Area Composition Analysis | Obtaining the People Composition Analysis by Area |
| 11 | | Get Residence By Grid | Obtaining the Residence by grid |
| 12 | | Get Area Migration Crowd Sum By Source Area | Obtaining the Person Count in an Area by Destination Grid |
| 13 | | Get Area Crowd IDs | Obtaining Customer Group Phone Numbers |
| 14 | Customer Insight | Query User Profile | Querying Customer Profiles |
| 15 | | Query All Tag Customer Profile | Querying Full Customer Tag |
| 16 | Digital Marketing | Offer Recommend | Post Recommendation to user |

Advertise for yacht club, when target people in Nice port area

1. Get City Information

2. Create Target Area

3. Obtaining Customer Group Phone Numbers

4. Select Campaign Target

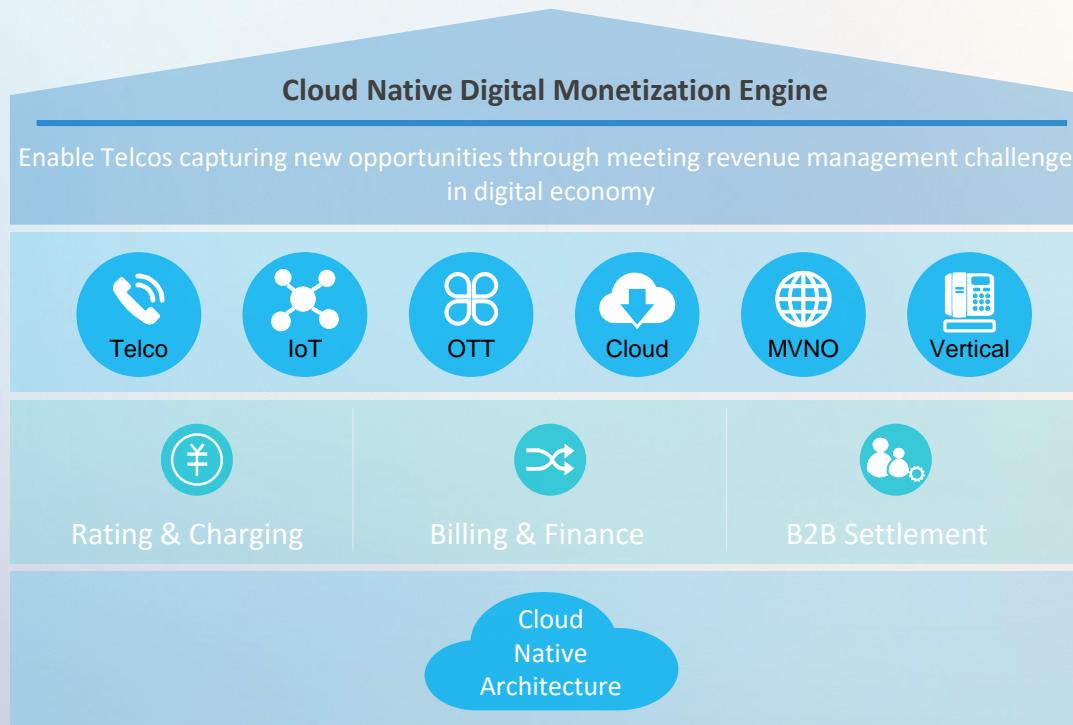
5. Campaign



Reach channel



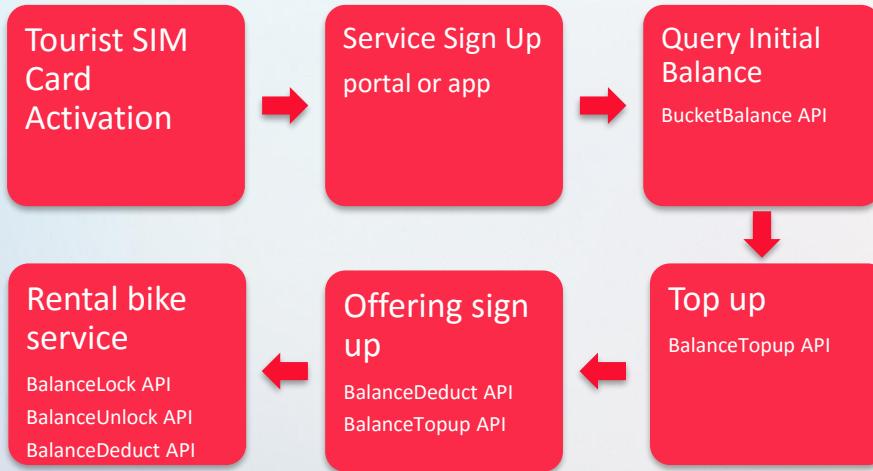
Huawei Digital Revenue Management



Huawei Digital Revenue Management as **Tie 1 CSPs favorite choice** is serving **1.9 billion** subscribers from more than **200** CSPs across **111** countries and regions in the world.



Digital RM Open Hack Scenario



Prepay Tourist Service:

1. Customer buy and active Tourist SIM card at airport retail store.
2. Customer sign up tourist service with mobile number through web portal or tourist service app.
3. Customer query initial balance in web portal or service app.
4. Customer top-up 30€ and get 3 € rental bike voucher.
5. Customer order a 7days safari offering (cost 10 €) and get 100 item free SMS as a bonus.
6. Customer enter rental bike menu, base on LBS (Location-Based Services) he/she chooses a rental bike and start rating, system will block 15€ balance, after customer release the rental bike, system will calculate rental fee base on time and distance.

API List

| Huawei APIs | TMF Conformance |
|---------------|---|
| BucketBalance | TMF654 Prepay Balance Mgmt API\bucketBalance |
| BalanceTopup | TMF654 Prepay Balance Mgmt API\balanceTopup |
| BalanceDeduct | New API was contributed. It is conformant with Crowdsourcing Rules. http://projects.tmforum.org/jira/browse/AP-861 |
| BalanceLock | New API was contributed. It is conformant with Crowdsourcing Rules. http://projects.tmforum.org/jira/browse/AP-861 |
| BalanceUnlock | New API was contributed. It is conformant with Crowdsourcing Rules. http://projects.tmforum.org/jira/browse/AP-861 |

Especially for You in Nice!



Enjoy your trip with Huawei APIs. See you in Nice!

THANK YOU

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Please visit these links for more information:

- Huawei Developer <http://developer.huawei.com/ict/en>
- FI-Universe <http://carrier.huawei.com/en/products/carrier-software/enabling-digital-operation-business-agility/fusioninsight-universe-big-data-analytics>
- FI-Universe <http://developer.huawei.com/ict/en/site-bigdata/solution/site-universe>
- Digital RM <http://carrier.huawei.com/en/products/carrier-software/enabling-digital-operation-business-agility/cbs>

Any question? Please contact with yuguozhu.yu@huawei.com.





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