

THE VENDOR INNOVATORS 2022

iBASIS Security iQ360
Digital Identity-as-a-Service
Artificial SMS Traffic Inflation Fraud
CPaaS Telco Solutions
SIM Swap Fraud Management
Mobileum Assurance Solution
Flash Call Prevention solution
ROLLOP (Rollout Optimizer)
Artificial Cyber Security Expert (ACE)



ROCCO

Featuring: iBasis, Infobip, Kaleyra, Mobileum,
Monty Mobile, RoamSmart, Security Gen

TABLE OF CONTENTS

01	.....//TABLE OF CONTENTS//
02	.....//TEAM//
04	.....//INTRODUCTION//
05	.....//METHODOLOGY//
06	.....//THE LIONS//
11	.....//THE INNOVATORS: OVERVIEW//
14	.....//GENERAL INFORMATION//
15	.....//INDUSTRY CHALLENGES//
19	.....//VENDOR PROFILES//
20	.....//IBASIS//
22	.....//INFOBIP//
26	.....//KALEYRA//
28	.....//MOBILEUM//
30	.....//MONTY MOBILE//
32	.....//ROAMSMART//
34	.....//SECURITYGEN//
36	.....//INNOVATIONS RANKING//
46	.....//MNOs OPINIONS ABOUT THE TOP 3 INNOVATIONS//
47	.....//CONCLUSIONS//
48	.....//REFERENCES//

BEHIND EVERY ROCCO REPORT IS A GREAT TEAM



ANTONIO RODRÍGUEZ MERELLO

LEAD RESEARCHER

Antonio is the Lead Researcher at ROCCO. Having an economics background, his main strengths are in linking business insights with academic debates for the telecommunications sector. Among other publications, he has co-authored prominent reports of the telecommunications industry such as The Innovators 2020 or the ROCCO IOO 2020.



SARA BEN MOUSSA

GRAPHIC DESIGNER

Sara is the Graphic Designer of this ROCCO IOO report. She is experienced in design and marketing, with interest in research. She collaborated in the creation of the course "Gaming Tech" and "Extended & Virtual Realities" for ROCCO U Digital Adventures Programme. She gave this report a visual structure, so all the information is represented in a good shape.



JASON BRYAN

CEO ROCCO RESEARCH

Jason is the CEO of ROCCO Research based in ROCCO Group Spanish office. He has overseen the last 9 years of in-depth monthly research on Industry Analysis, Vendor Performance, Market Intelligence and Market Pricing in the Roaming and Interconnect space. Jason was the founder of ROCCO in 2012, building on 25 years of experience in Roaming and Interconnect roles in Vodafone, Telefonica Groups and several Vendors, as well as GSMA Chairmanship roles. Jason is also the co-founder of Innovative Operators (IO).

DHIRAJ WAZIR

CEO ROCCO STRATEGY



Dhiraj is the CEO of ROCCO Strategy and a co-founded Innovative Operators (IO). Dhiraj is a subject matter expert in the Telecommunications field of Roaming & Interconnect. Dhiraj has spent over 20 years working on Roaming Wholesale, Product Management and Retail Propositions. Dhiraj has had a broad remit, building his telecom career with the Hutchison group, T-Mobile, EE and BT before joining ROCCO. Dhiraj is based in London, UK.



INTRODUCTION

One of ROCCO's major aims is to highlight the contribution to innovation in Fraud & Security, Messaging, Roaming and Interconnect. Over the years, we have conducted the vendor innovators research where vendors from the telecommunications industry were rated by MNOs according to their contribution to innovation.

Being this the fifth edition of the Vendor Innovators, the ROCCO team decided to refine the approach. In previous reports, operators rated vendors' contribution to innovation from a general perspective. However, this year vendors were contacted to take a step forward and present a specific solution. As a result, 7 vendors from different areas of the telecommunication industry are presenting their solutions.

Besides counting on the opinion of mobile operators, this new edition features the Lions' Den. In essence, participant vendors pitched their innovative solutions which could help the Fraud & Security, Messaging, Roaming and Interconnect areas to generate revenues or save costs, become more efficient or offer more quality solutions to end subscribers. They presented to a panel of judges, known as the Lions, who gave live feedback to them in front of the Genesis audience.



METHODOLOGY

The methodology employed for this report is formed by two major steps which are registration and voting.

REGISTRATION

Vendors that were interested in this initiative registered with ROCCO and they could present up to 3 solutions.

- Vendors presented their innovations at the Showcase sessions that took place on February 1st and 2nd
- ROCCO notified all MNOs about this initiative
- ROCCO launched a survey where only mobile operators could participate

VOTING

The voting phase of the Vendor Innovators 2022 has the following steps:

- A survey was launched after the Showcase where MNOs could rate the participant solutions
- As part of ROCCO Genesis event, we held the Lions Den on 17th May 2022 where both the Lions and Genesis audience rated the solutions

RESULTS

The top 3 vendors of The Vendor Innovators' research were announced at The Visionaries Gala of Genesis 2022 (ROCCO's annual event) that took place on May 17th.



LION'S DEN

THE LIONS

ROCCO is honoured to present the lions, who are a fine selection of judges from all around the globe. Given their diverse backgrounds, we firmly believe that the lions have proven expertise in the telecommunications industry. Expertise, alongside specific traits make them the right fit for assessing the participant solutions.





ATIM AKEH-OSU

MTN GLOBAL CONNECT

A business strategist and telecommunications professional, Atim Akeh-Osu possesses a diverse background in telecoms operations and management. Her 20 years of experience span across Carrier relations, International Roaming, Marketing & Strategy and Enterprise Business where she has delivered dynamic models for business efficiencies and consistently supports several digital transformation initiatives. Distinguished for expertise in cross-functional coordination, she has led teams to achieve personal and organisational potential. She believes in the evolution of the telecommunications industry and supports innovative solutions as a means to industry sustenance and relevance in our fast-paced digital world.



CAMERON DUNN

AT&T

Cameron Dunn is a highly-accomplished and innovative Director of Inter-Carrier Service Development, with over 20 years of in-depth knowledge and experience in leading teams in the ideation, development and implementation of new mobile roaming products and services. Over his career in mobile communications, Cameron has had the opportunity to work in systems management, billing, operations, architecture, marketing, standards, strategy and development, allowing for success via comprehensive 'end-to-end' experiences in the mobile communications business.



LUC LAMOUREUX

RELIANCE JIO

Luc Lamoureux is the Director of International Roaming and Planning at Reliance JIO, a 4G only operator with over 400 million subscribers. As an International Roaming expert, he has 25 years of experience and hands-on roaming knowledge. Having worked in Canada, Switzerland, Luxembourg, Belgium, Bahamas and USA, Luc is a gentleman of the world and a true roamer. Spending half of his career working with an operator and the other half with roaming service providers, he has a great understanding of the entire roaming ecosystem. Luc has been involved with the development of industry standards for many years and has been the WAS Deputy Chair since 2019.



STEPHANIE FLEURY

CNN BRAZIL

With entrepreneurial vocation, Stéphanie was CEO and founder of the digital account DinDin, which was incorporated by Bitz/Bradesco in 2020, becoming the first woman to sell a startup to a bank in Latin America. After DinDin's exit, she became Chief Sales Officer for Bitz and is now a TV host for CNN Brazil. Stephanie had extensive experience in the telecom market, where she worked at TIM, Oi, Cisco Jasper in Silicon Valley (California) and at Digicel Group (Kingston, Jamaica) and used to contribute to the GSM Association. She is also a Business Advisor for Sony Pictures Entertainment, for the reality show Shark Tank Brazil and was the first woman to assume the position of director of the Brazilian Fintech Association (ABFintechs).

THE INNOVATORS: OVERVIEW

Over the years ROCCO has released several studies that focus on the innovation contribution of telecom vendors. Our goal is twofold since, firstly, it is important to recognise the companies that push boundaries by introducing new products and services. Also, different stakeholders in the telecommunications industry can make better decisions based on this information. A recurrent issue in the telecom industry is the excessive use of the term innovation which, at times, makes it a pointless term. In the view of Drucker (2002), innovation is the set of actions implemented by an entrepreneur that creates new wealth-producing resources or enhances existing resources with more potential. In this regard, ROCCO identifies innovation as the process behind the design and implementation of new technologies and services that either provide a better user experience or improve existing processes.

2021 marked a change in ROCCO's innovators initiative as, for the first time, mobile operators were invited to participate in The MNO Innovators. Moreover, for the first time, it was decided that participants should take a step forward and present a solution that they considered as innovative. Additionally, The MNO Innovators represented a challenge to a general misconception about mobile operators not being sufficiently innovative. However, this is arguably a misconception as over the years, operators have been pushing for innovation in key aspects such as developing industry standards or their solutions. The participant innovations ranged from a wide array of use cases that not only encompassed customer-centric solutions but also, processes associated with Roaming management. Moreover, the solutions featured state of the art technology as exemplified by the use of Artificial Intelligence (AI) or Internet of things (IoT).



The measurement of innovation and what its actual impact consists of can be a subject of debate. The following classification provided by Creative Realities (2015) gives a clearer overview of the innovation levels.

INCREMENTAL INNOVATION

Vendors that make incremental innovations based on existing solutions. This consists of small, yet meaningful improvements in products, services, and other ways in which they do business. These tend to be the "new and improved" innovations. They can be easily visualized and quickly communicated and give vendors something new with which to grab consumer attention in an increasingly noisy marketplace.

BREAKTHROUGH INNOVATION

Vendors whose innovations lead to breakthroughs in our industry. This is a meaningful change in the way you do business that gives consumers something demonstrably new (beyond "new and improved"). Breakthrough innovation produces a substantial competitive edge for a while, although the length of time anyone can maintain such an advantage is growing increasingly shorter.

TRANSFORMATIONAL INNOVATION

Vendor innovations that transform our industry altogether, potentially creating new industries or radical changes to how we work. This is usually (but not always) the introduction of a technology that creates a new industry and transforms the way we live and work. This type of innovation often eliminates existing industries or, at a minimum, totally transforms them. For this reason, transformational innovations tend to be championed by those who aren't wedded to existing infrastructure. Transformational innovations are exceedingly rare.

In the previous Innovators report, we used two attributes for each innovation level

INCREMENTAL INNOVATION

FAITHFUL

The attribute faithful denotes those kinds of vendors who always faithfully make incremental changes to their solutions in a reliable way. Those companies that provide products that do not usually have defects or complaints, are also innovative to support specific client needs and their products evolve every year.

COLLABORATOR

A company is considered a collaborator when it works with MNOs to make incremental changes to its solutions. It caters to MNOs in services such as reducing their costs, increasing their quality or providing them with efficiency gains.

BREAKTHROUGH INNOVATION

INTREPRENEUR

Intreprenuer is the attribute that denotes a breakthrough innovation through a company culture where internally staff are encouraged to think like entrepreneurs, starting start-up style thinking and products and services inside the business. Companies which exploit innovation opportunities in the market, take risks in developing new products or services and keep an innovative stance despite success or failure.

CHALLENGER

A challenger company is breaking through as an innovator by challenging the normal activities and looking to innovate the industry it works in. It has an active stance in the development of new standards and processes, they also challenge current standards to improve the situation for MNOs and wants to innovate the industry.

TRANSFORMATIONAL INNOVATION

VISIONARY

A visionary is the kind of company that wants to make its mark by transforming the industry and making it follow its vision. To be considered a visionary, a company must invest in research and development (R&D) but also be open-minded and think proactively about where the industry is heading.

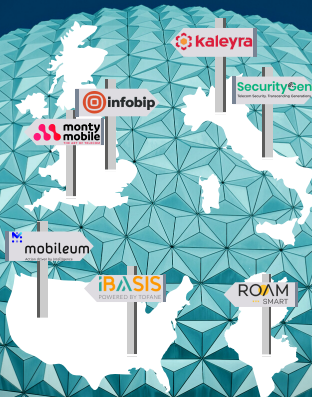
INVENTOR

Finally, the inventor company is the epitome of a transformational company. It cannot settle with traditions and needs to be always looking to advance the industry with benefit to all. In other words, inventors have original ideas as well as inspire other companies and make customers feel excited about their new products.



GENERAL INFORMATION

WHERE ARE THE VENDORS LOCATED?



BY ROCCO



INDUSTRY CHALLENGES

In this section, we cover some of the major industry issues that ROCCO has retrieved from different surveys. One of ROCCO's goals as a company is to contribute to the improvement of the telecommunications industry by creating a platform to discuss positive developments, but also, about what areas need improvement.

FRAUD & SECURITY

Regarding Fraud & Security (F&S), there are several pain points worth addressing. For instance, in the latest **SMS Firewall** Vendor Benchmarking Report, many MNOs indicated that Bypass is the major threat associated with **SMS**-related Fraud. To add further complexity, operators are renewing their infrastructure with both the deployment of 5G and the decommissioning of legacy networks. In this regard, there are high expectations for the Security Edge Protection Proxy (**SEPP**) in providing a better network security architecture. Among **SEPP** features, it is emphasised that it provides end-to-end confidentiality and integrity between source and destination networks for designated message elements. In ROCCO's Signalling Firewall Vendor Benchmarking Report the majority of operators indicated that they are planning to implement a signalling firewall in addition to **SEPP**. This reflects the current status of the network infrastructure as we are not currently in a 5G standalone (**SA**) scenario.

"Voice OTP & Flash Call"

"Flash Calls, In-app authentications"



ROAMING

Regarding Roaming, ROCCO has recently retrieved information about the challenges that operators are facing in the area of 5G and VoLTE Roaming. For VoLTE, some MNOs have raised their complaints that not all handset vendors are supporting VoLTE roaming. In the case of 5G Roaming, only a small fraction of operators are currently considering deploying a full 5G SA network. This indicates that, at least in the short term, most MNOs will feature a hybrid model where both 5G SA and NSA coexist. With regards to network slicing, a significant percentage of operators do not have a clear stance to offering it to Roaming partners. In this regard, it is expected that as 5G deployments increase, operators will be more proactive in terms of offering network slicing.

"Smart cities and Transport & Logistics are the most interested sectors in 5G SA Roaming"

"Support for VoLTE roaming from handset vendors (should be fixed by now)"

"MNOs identify the availability of new services as the main opportunity in 5G SA Roaming"

FIND OUT MORE INFORMATION AT





MESSAGING

Messaging is one of ROCCO's core areas of research as we have been analysing the A2P SMS market since 2015. Over this period, there have been changes such as the consolidation of the Communication Platforms as-a-Service (**CPaaS**) or the emergence of over-the-top (**OTT**) messaging applications. However, despite these important transformations, it seems that SMS is still leading as the major communication channel. This represents a milestone in the history of telecommunications given that SMS was developed in the early 1990s. If one thing is clear is that COVID-19 represented a big push up to the volumes of this channel. In this regard, industry consensus point to one word which is ubiquity. As SMS is compatible across all devices, this makes this channel have a key advantage in comparison to other newer alternatives. Despite its success, MNOs worldwide are still suffering the impact of grey routes which reduces the monetisation of this channel. In this regard, the insufficient momentum of RCS is also partly explaining the dominance of A2P SMS. However, this trend can be reversed if different stakeholders get more involved in RCS. This is exemplified by the Cross Carrier Messaging Initiative (**CCMI**) by MNOs in the United States. Also, if iOS devices supported this messaging channel, its adoption would likely increase. Finally, it is expected that A2P SMS will continue to be dominant in the short term, however, it remains unclear which messaging channel will overtake it.

ROCCO'S UPCOMING A2P SMS REPORTS WILL BE PUBLISHED AFTER GENESIS

CPaaS

MARKET INTELLIGENCE REPORT 2021



A2P SMS

MARKET INTELLIGENCE REPORT 2021 - 4th EDITION



A2P SMS

MARKET INTELLIGENCE REPORT 2021 - 5th EDITION



VENDOR PROFILES

This section features a general overview of the 7 participant vendors and a description of the 9 solutions that they are presenting. The icons below explain the type of information featured in the profiles.

GENERAL INFORMATION

Where are the vendors based?



How many offices they have?



What type of company they are?



How many employees they have?



Who presented the solution at Genesis?



iBASIS

POWERED BY TOFANE



HQ Location
Lexington, USA



Offices
16



Company type
Private Company



Employees
201-500



Services offered

- International Voice Termination**
- Internetwork Packet Exchange (IPX)**
- Mobile Value Added Services**
- VoIP**
- Global Mobile Signaling (GMS)**
- HD Voice**
- VoLTE**
- Fraud Solutions**
- LTE Data eXchange (GRX)**
- LTE Signaling eXchange (LSX)**
- LTE Roaming intelligence tools**

iBASIS

POWERED BY TOFANE



FLORIN NEAMTU

in

iBASIS Security iQ360

iBASIS is presenting Security iQ360 which is a solution that belongs to the area of fraud & security. The telecommunications industry is in a current scenario of growing complexity which makes necessary a holistic approach that reduces potential threats. A recurrent issue is the financial impact derived from fraud as it is estimated that MNOs worldwide lose around **28 billion USD**. Moreover, there is an increasing degree of network complexity as many operators have 3G, 4G and 5G networks simultaneously. Given this set of developments, it is worth having a solution that allows operators to tackle these issues. Other factors are also worth noting such as the increase in financial pressure on the operator side in terms of 5G and IoT deployments while there is also a shortage of cybersecurity workers.

iBASIS anti-fraud approach is threefold as it targets threats in voice, SMS and signalling. Security iQ360 has a cloud-based structure which provides a set of advantages when compared to on-premise solutions. For instance, it does not intrude on the customer networks as it is deployed and managed in the IPX network. From an investment perspective, the deployment of this solution does not require a long set-up period and no internal operating expenses (OPEX) after installation. Another key advantage is that it detects attacks even if MNO internal protection is bypassed.

**HQ Location****London, UK****Offices****65****Company type****Private Company****Employees****1001-5000****Services offered**

A2P SMS messaging
Mobile operators solutions
2-Factor Authentication
Operator partnerships
Telecommunications
REST API
Omnichannel communications
RCS
Mobile Identity
WhatsApp Business
Messaging

Engineering
Development
Customer Experience
Retail Communications
Banking communications
Chat Apps
SaaS



Infobip is presenting three solutions that belong to the areas of fraud & security and messaging.



SHAM CAREEM

in

Digital Identity-as-a-Service

The current context of increasing digitalisation is giving way to the rise of mobile identity. In explaining this process, COVID-19 and the changes in customer behaviour have played a strong role as digital channels are more important than ever. This shift towards online puts mobile at the centre of everyday matters such as shopping, banking, travel or entertainment. However, there has been a rise in fraudulent activity which has harmed subscribers but also operators. Among the issues, identity theft is a great problem as exemplified by the unsolicited opening of new accounts and the takeover of existing accounts. All in all, this puts the dilemma of security vs. customer experience at the centre of industry debate.

Digital identity can play a strong role in solving these issues and telcos are perfectly positioned to solve the challenges as they have key information about subscribers. Infobip's Digital Identity-as-a-Service is based upon both mobile identity (MI) and biometric identity (BI). The combination of both elements allows telcos to launch an end-to-end digital identity solution. By registering the SIM card using biometrics it is possible to create a digital identity database that can be used for a range of use cases (e.g. app verification or transactions). Also, the MI features can be integrated into the telco's existing MI solution. Infobip's mobile identity solution, iGate, is deployed inside the network, or as a SaaS product in the cloud. It connects to internal APIs and allows 3rd party enterprises to securely access the identity credentials of end-users (attributes). From a telco perspective, the addition of digital identity services expands their enterprise portfolio in a critical segment. Moreover, for consumers, it creates a digital identity with a trusted provider in minutes, 24/7 365 from anywhere that can be used for different purposes.



JOHN MURTAGH



Artificial SMS Traffic Inflation Fraud

Artificial SMS Traffic Inflation is a type of fraud that consists of the inflation of SMS traffic in certain international locations to profit from high international traffic charges. As a result, it generates issues for operators and subscribers who can be identified as fraudsters or can incur high bills. As fraud traffic has an international destination, this type of fraud is hard to detect. Moreover, the destination can be a real or a virtual number, and rarely, a domestic one. Some examples of these fraudulent messages are two-factor authentication (2FA), Spam or random phrases.

Infobip's solution sGate is based upon a firewall that has detecting and blocking capabilities for various types of unsolicited and fraudulent messages. One of the key features of the firewall is that it is focused on the senders rather than destinations, and this allows a quicker reaction for blocking unsolicited messages. sGate uses Artificial Intelligence (AI), Machine Learning (ML) or Natural Language Processing (NLP) which provide more efficient filtering of the SMS traffic. Given that Infobip has over 600 developers and over 30 are assigned to sGate this allows to immediately react against artificial SMS traffic inflation. This solution will incorporate new features for automated and instantaneous message monitoring and filtering. However, it is also crucial that awareness is risen to minimise the negative effects derived from this type of fraud.



ANDRIJA MIŠKOVIĆ

in



IVAN BULJAN

in

CPaaS Telco Solutions

Recently, digitalisation has increasingly gained momentum which among other things has spurred the need for omnichannel communication. This poses a challenge for operators as they need to maximise customer engagement given both time and financial constraints. In essence, telcos have the channels for communication, but they need the tools for more efficient management given the increasing demand for customisation. Moreover, operators have enterprise clients but lack the tools to market them properly. Therefore, to overcome these challenges telcos need to implement a proper digital transformation strategy. Infobip's CPaaS Telco Solutions encompass the CPaaS Telco Customer Solution and the CPaaS Telco Partnership.

The CPaaS Telco Customer Solution is a communication platform that rests upon the foundation of a customer communication strategy that is suitable for the requirements of telcos. In this regard, Infobip's solution allows an enhanced organisation of channels such as SMS or voice. Also, it integrates them with operations support systems (OSS) and business support systems (BSS). This creates gains in internal communication efficiency while users get the ability to communicate the way they want and in the channel that they prefer.

The CPaaS Telco partnership allows operators to leverage their position as connectivity providers for enterprises by adding a CPaaS solutions portfolio. Given that developing the tools and integrating with channels requires a vast amount of resources, the partnership allows telcos to use an established CPaaS suite. Besides not requiring capital investment, this solution puts telcos in a central place of digital transformation. Last but not least, as OTT messaging apps from part of CPaaS, it can represent a change of paradigm where OTT will stop being a foe for MNOs.



HQ Location
Milan, Italy



Offices
18



Company type
**Listed on the Stock
Exchange**



Employees
201-500



Services offered

Mobile
FinTech
WhatsApp Business
Omnichannel
Cloud communication
API
Messaging
Voice
Contact centre
Whatsapp business API

Chatbot
Communication
Business communication
Communication tools
IVR
2-way messaging
Click to call
RCS
Video



LARA WEISZ



JUSTYNA MIZIOLEK



SIM Swap Fraud Management

SIM swap fraud management is the solution presented by Kaleyra which addresses a recurrent type of fraud. SIM Swap fraud occurs when a fraudster retrieves the personal details of a subscriber by phishing, socially engineering or buying from organised criminals. As a result, subscribers might get stolen their money or their personal information might get filtered. Kaleyra's solution allows banks and financial institutions to detect SIM swap fraud during the sending of transactional SMS one time password (OTP) through International mobile subscriber identity (IMSI) or timestamp verification. This solution is useful for Authorization of important or high-risk operations and transactions, user verification during the onboarding phase or authentication for login to a user's account.

The way the solution works is the following if a transaction or home banking operation is made, the bank requires 2FA through OTP SMS. Kaleyra sends the OTP through SMS, also, asynchronously Kaleyra provides the bank with a report containing IMSI or timestamp. It is worth noting that in 2022 an update will be included where the identification information is sent before the SMS is sent, or even if no SMS is sent at all. With this information, the bank evaluates the risk for that transaction, then the transaction is performed or stopped depending on risk analysis. This has been largely helpful to financial institutions to prevent fraudulent transactions which are detrimental to both users and banks. For instance, Almost **60M** customers' accounts and credit cards have been monitored and over **95%** of frauds were blocked timely.



mobileum

Action driven by intelligence



HQ Location

Cupertino, USA



Offices

18



Company type

Private Company



Employees

1001-5000



Services offered

- Telco Big Data Analytics**
- Traveler Analytics**
- Mobile Roaming**
- Data Monetization**
- Mobile Virtual Network Enablement**
- Active Testing**
- LTE Roaming**
- CEM - Customer Experience Management**
- M2M**



mobileum

Action driven by intelligence



STEVE BROOKS



Mobileum Assurance Solution

The industry is currently in a context where 5G and Next Generation Networks enable a wide range of connected applications with high standards of quality and experience required. For instance, MNCs need to design and make operating networks for ultra-low latency, bandwidth greater than 100Mbps or retainable connectivity across landscapes. In this regard, **OSS** challenges are driving the need for innovation in assurance.

Mobileum Assurance Solution (**MAS**) is positioned to address component lifecycle management and artificial intelligence for **IT** operations (**AIOps**) segment. **MAS** provides complete lifecycle support for 4G and 5G Services which includes testing for service assurance. This is accompanied by a customer experience management (**CEM**) that gathers metrics from various sources and systems. Additionally, **MAS** supports all phases of the service lifecycle such as video quality, mobile money, emergency services or the connectivity platform.

This solution enables a 360° view of Service Assurance for nextgen mobile/wifi/fixed networks and subscribers. For instance, deep network analytics (**DNA**) simplifies monitoring outage impact and isolation for all user plane services and control plane functions. Also, the Enriched Service Assurance allows better monitoring in 5G networks which are increasingly complex in terms of virtualisation and cloudification.



HQ Location
London, UK



Offices
19



Company type
Private Company



Employees
501-1000



Services offered

Telecommunication Solution
SMS Hubbing
Roaming Services
Advanced Mobile Technologies
Value Added Services
Fintech Services
Gaming Portals



RAZAN ITANI



SARAH BARAKAT



Flash Call Prevention Solution

Monty Mobile is presenting a solution that prevents flash calling fraud. Flash Calls is a zero-rated channel being used to bypass **A2P** SMS verification traffic. This has a negative impact on operators' revenues as it impedes the monetisation of international **A2P** traffic. Therefore, with this solution is possible to stop all illegitimate calls to protect the MNO's **A2P** revenue.

Flash call prevention solution is based on combinations of smart criteria to take immediate blocking actions to impact positively the conversation rate. This solution is based on ongoing penetration and **OTT** testing done on the MNO's network. In this regard, selected Ranges/Prefixes will be indicated as the source of flash calls to be blocked accordingly. In terms of the model, this is a standalone (**SA**) solution that can be based on capital expenditures (**CAPEX**) or **OPEX**. Moreover, it is possible to customise according to the operators' setup. For instance, it considers call rerouting setups, Customized Applications for Mobile networks Enhanced Logic (**CAMEL**) or other criteria. If in the future **OTTs** increase the use of flash calls, this solution has the potential for a becoming a key tool for operators in the area of fraud prevention.

ROOM

... SMART



HQ Location
Tunis, Tunis



Offices
2



Company type
Private Company



Employees
11-50



Services offered

Roaming VAS
Consulting
RAEX
Roaming Business Intelligence
Roaming Management
Big Data
Discount Contract Management



MEHDI TRIKI



ROLLOP (Rollout Optimizer)

With a focus on Roaming, RoamSmart's Rollout Optimizer (**ROLLOP**) aims to streamline the complexities associated with Roaming management. It is worth considering the considerable amount of manual work required which increases the likelihood of human errors and delays in decision making. As a result, this has a potential negative impact on operators' margins and points out the necessity of an automated roaming platform.

ROLLOP helps Roaming Teams need to prioritize the rollout activity and automate the roadmap definition based on technical and business criteria. In essence, is a big data-based application which combines several technical and business inputs from different sources and formats. It provides the priority roadmap for new service openings and selected roaming partners by using a prioritisation algorithm tailored for each customer based on their business strategy. This is based on ensuring that each operator has full flexibility in terms of a customised algorithm. The business model follows a software-as-a-service (**SaaS**) approach. Specifically, it has a set-up fee (Account configuration + integration with inputs sources) and a monthly software subscription fee. In terms of future refinements, the solution will include additional criteria such as network quality ranking, financial reliability or Commercial potential (number of existing roaming partners in the same country).

SecurityGen

Telecom Security. Transcending Generations.



HQ Location
Rome, Italy



Offices
10



Company type
Startup



Employees
51-200



Services offered

- Telecommunications
- Cybersecurity
- Network protection
- 5G security
- Security Assessment
- Subscriber protection
- Signalling Firewall
- IoT connectivity
- Security research
- Express monitoring



PAOLO EMILIANI



Artificial Cybersecurity Expert (ACE)

Based on artificial intelligence (AI), SecurityGen's solution is called the Artificial Cybersecurity Expert (**ACE**). In a context where digitalisation is rapidly increasing and the adoption of new technologies has gained momentum. The interplay of these factors has increased the degree of dependency while the ecosystem is not sufficiently ready for existing threats. On one hand, businesses require a high speed of implementation though technology readiness sometimes is not there yet. On the other hand, Governments and regulators are not ready to accept a higher level of dependency as is, so they are introducing additional rules and compliances.

This solution performs real time attack simulation checks if there are any relevant threats to the mobile network infrastructure. It also provides remediation guidance to address existing threats in the network according to priority. Moreover, it controls infrastructure security posture turning it into a business as usual operations. **ACE** works by identifying the landscape which includes networks, assets and devices. The simulation of real attack scenarios according to the selected inspection plan. According to the network's response, the solution assigns the status to different vulnerabilities and lists outcomes. Moreover, it generates security posture results in a report with severity level, description of threats found and how-to-fix details. As the scenario is subject to constant changes, **ACE** provides a continuous inspection that is performed automatically to estimate the effectiveness of configuration changes.



INNOVATIONS RANKING

The innovations ranking has been computed by considering the ratings of the first round of voters and the ratings provided by the Lions and the Genesis audience. The solutions are ranked according to their overall score.



ROCCO



Digital Identity-as-a-Service

TOP SOLUTION



Artificial Cybersecurity Expert (ACE)

SecurityGen

Telecom Security. Transcending Generations.



Artificial SMS Traffic Inflation Fraud



ROLLOP (Rollout Optimizer)

ROAM
... SMART



Flash Call Prevention Solution



CPaaS Telco Solutions



SIM Swap Fraud Management



Mobileum Assurance Solution



mobileum

Actions driven by intelligence



iBASIS Security iQ360

iBASIS
POWERED BY TOFANE



MNOs OPINIONS ABOUT THE TOP 3 INNOVATIONS

DIGITAL IDENTITY AS-A-SERVICE

"The phone has become part of our daily life, here we have our bank accounts and we do most of our transactions through it. The digital identity is something fundamental today. It is a new product where operators can get some benefit, in addition to providing greater security to our end customers, which ultimately increases loyalty and satisfaction with them."

ARTIFICIAL CYBERSECURITY EXPERT

"It's a new approach to finding threat/vulnerabilities with AI capabilities that able to correlate threat"


"It conducts ongoing security assessments to monitor the entire network and expose any flaws or vulnerabilities"

ARTIFICIAL SMS TRAFFIC INFLATION FRAUD

"After the pandemic, there was an increase in the use of digital channels, many fraudulent SMS began to arrive. Most were spoofing, however we must be careful with new forms of traffic that increase international traffic to unknown destinations and applications that only seek that the subscriber pays for some service."



CONCLUSIONS



With a similar focus than previous editions, The Vendor Innovators 2022 has proven again that the telecommunications industry is formed by people who push boundaries in innovation. The different solutions featured in this report show how telecoms is currently evolving as exemplified by increasing role of AI and the consolidation of digital identity. It is also worth noting that participant solutions cover different use cases as some are focused on the customer while others address the processes associated with roaming management.

ROCCO wants to acknowledge all participant vendors for their interest in this initiative and for sharing the information about their solutions. Also, the lions have provided key insights about the solutions presented which will help the vendors refine their solutions. On a final note, the ROCCO team wants to appreciate the people from Genesis audience who have come from different parts of the world to take part in this initiative.



REFERENCES

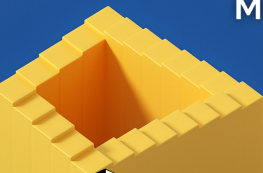
Drucker, P.F., (2002). The Discipline of Innovation. Harvard Business Review, Vol. 76, Iss. 6, pp. 149-157

ROCCO RESEARCH (2020). The Innovators Market Intelligence Report

ROCCO RESEARCH (2021). The MNO Innovators Report

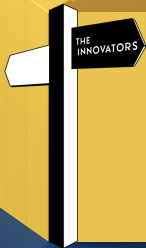
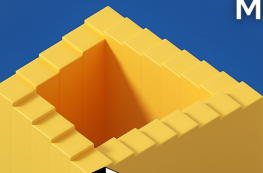
Terwilliger, J., (2015). The Three Levels of Innovation. Creative Realities. Retrieved from: <http://www.creativerealties.com/innovationist-blog/bid/49954/The-Three-Levels-of-Innovation>

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**THE
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