Partnering with Actility

Making a difference in building smart cities
Transforming Whole Industries

Building smart cities

Cities are the most important economic, geographic and administrative entities in today’s world – and their prevalence will only increase in the coming decades. But many urban areas will struggle to function effectively due to challenges such as ageing infrastructure, air pollution, traffic congestion, and demographic shifts. The cities that thrive will be those that are able to adopt smart solutions – so reliable access to the Internet of Things (IoT) is essential.

Inmarsat connectivity is enabling the transformation of Rwanda’s capital Kigali into a knowledge-based, smart city hub. LoRaWAN (Low Power Wide Area Network) infrastructure around the city provides a connectivity platform for a variety of IoT applications that can address any number of urban needs, including transport, utilities, health and education. Kigali will provide a blueprint for connected city projects throughout Africa, with satellite communications acting as the essential enabler of the emerging global digital society.

70%
global population will live in urban areas by 2050

41
megacities expected globally by 2030
Making a difference in developing infrastructure

Partnering with Globalsat
Managing Brazil’s railways

The ability to connect people and things has never been so important. Developing countries are building the infrastructure required to support their economic growth. In Brazil, Valec is building the North–South railway line to enable the movement of valuable commodities along the entire length of the country. To successfully deliver this colossal project, Valec needed a better way to control the flow of traffic and operations while the partially in-use line was completed.

Inmarsat partner Globalsat has installed BGAN terminals in rail vehicles so the central operations centre can use GPS tracking to pinpoint their location and talk to the drivers on push-to-talk radio handsets anywhere and at any time, thanks to Inmarsat’s highly reliable L-band satellite network. The ability to react quickly will improve safety and efficiency both during construction and once the line is fully operational, helping power Brazil’s economic growth.

2,275km
length of the North–South railway
Making a difference in cyber resilience at sea

Partnering with Trustwave

inmarsat
The mobile satellite company
Transforming Safety and Security

Cyber resilience at sea

In today’s connected world, the threat of cyber crime is very real. The high profile attack on A.P. Moller-Maersk in 2017 is reported to have cost the company between $200m and $300m*.

Satellite connectivity has driven the growth of computer systems controlling navigation and operations, bringing a new level of sophistication to shipping. Meanwhile, crew are bringing on board more devices and consuming more content. The threat from malicious attacks to a ship’s infrastructure has never been so real. It can have a substantial effect on the safety of crew, security of data and theft of valuable cargo, which is why cyber resilience at sea is essential.

Inmarsat’s Fleet Secure, powered by the Trustwave Unified Threat Management system, gives vessel operators the tools they need to protect their fleet from cyber attack, detect vulnerabilities and respond to threats. With Fleet Secure as a Managed Service and seamlessly integrated into Fleet Xpress, there is peace of mind and complete visibility and protection of vessels today and in the future.

44% of shipping companies believe their current IT defences are not effective at repelling cyber attacks (source: Futurenautics Cyber Security Survey Sept 2017)

* Source: Financial Times
Making a difference in sustainable fishing
Sustainable fishing

The fishing industry is critical to the global economy, providing food security, substantial revenues, and employment. But environmentally unsustainable fishing – including illegal and unreported catches – is having an enormous ecological and financial impact.

Inmarsat is working with a number of project partners including the United States Agency for International Development’s Oceans and Fisheries Partnership (USAID), producer Thai Union and application provider BitCliq to improve traceability and promote sustainable fishing. We are installing low data rate services Fleet One and IsatData Pro on fishing vessels to improve catch documentation and traceability (CDT). Satellite broadband communication with innovative technology such as blockchain allows fishing vessels’ owners, captains and crew to monitor stocks, locate fish faster, and reduce operational costs. There’s safety and welfare benefits too – access to real-time weather forecasts and navigational warnings makes for safer voyages, and crew can phone or text home. Findings from these initial projects will be used to continue to support sustainable fishing across the globe.

85% of the world’s fisheries are either fully exploited or overfished (source: WWF)

inmarsat.com/fleet-one
Making a difference in greener shipping

Partnering with Rolls-Royce
Transforming Efficiency and Operations

Environmental compliance

Monitoring ships’ energy consumption and emissions is required by law in many parts of the world. With fuel soaking up 46% of running costs on average (source: Drewry), shipping companies have another powerful incentive to make sure their vessels are running smoothly.

Rolls-Royce’s Energy Management system collects data from a multitude of ship control systems and equipment sensors. Using Inmarsat’s high speed, always-on broadband service Fleet Xpress (FX), this data will now be logged or reported in real time – meaning any inefficiencies can be flagged and immediately dealt with, often remotely. But Fleet Xpress is more than just a connectivity pipe. Vessels also have access to Inmarsat Gateway, an application ecosystem where accredited innovators create content-rich solutions integrated with our network. Application-triggered bandwidth usage allows ship managers to choose whether to dedicate part of their bandwidth allocation to specific vessel efficiency measures, or for the app itself to trigger bandwidth dynamically by the hour. Together, these technological advances will enable safer, smarter, greener and more efficient vessels.

1000m
tonnes of CO2 emitted annually by maritime transport (source: IMO)
Making a difference in airline revenue models
Opportunities in ancillary revenues

We know the appetite for inflight broadband is there – 60% of respondents in the 2017 Inmarsat Inflight Connectivity Survey considered it a necessity, not a luxury – but what is passenger connectivity worth to the global airline industry?

In the first research study of its kind, the London School of Economics and Political Science (LSE), in association with Inmarsat, developed an independent forecasting model to predict how broadband-enabled ancillary revenues are set to take off. The result: Airlines are the gatekeepers of a staggering $130bn* of ancillary revenues by 2035, of which the airlines themselves will potentially benefit by $30bn*.

Reliable, high-quality broadband connectivity is the catalyst for targeted advertising, content and e-commerce revenue opportunities. Once airlines can offer uninterrupted broadband services, each passenger can be worth $4* more per flight – that’s a potential 2,000% rise within the next 17 years.

* Source: Sky High Economics report
Making a difference in Europe’s busy skies
Transforming Personal Connectivity

European Aviation Network

The European Aviation Network (EAN) solves the problem of how to deliver reliable, high-speed broadband to planes in the increasingly busy skies above Europe. The result of an innovative partnership between Inmarsat and Deutsche Telekom, EAN is an integrated satellite and air-to-ground network that has the capacity required for passengers on crowded routes to enjoy high bandwidth applications such as live streaming.

Built for Europe by Europe, the network will generate around €2bn for the European aviation industry and create more than 500 highly skilled jobs, which will produce incremental tax revenues of around €440m. As well as being cost-effective to install and maintain, EAN is uniquely flexible and scalable in order to cope with the projected doubling of European air traffic over the next decade. Small, lightweight antennas help create the industry’s most CO2- and cost-efficient connectivity solution.

€2bn
generated for the European aviation industry

€440m
incremental tax revenue

European Aviation Network

europeanaviationnetwork.com

Statistics source: IATA
Making a difference in cockpit safety and operations
Transforming Operational Efficiency

Aviation safety and operations

Over the last 15 years, global air transport passenger levels have soared from 1.6 billion to 3.8 billion*. That’s only been possible because satellite communication in the cockpit has enabled airlines to safely put more planes in the sky at any one time and open up more routes. Improved Air Traffic Control (ATC) and operational benefits such as better fleet management and increased efficiency have saved the airline industry an astounding $3 billion* over that time.

With passenger numbers predicted to double by 2035, Inmarsat is transforming aviation connectivity again. SwiftBroadband-Safety offers high-speed, secure IP connectivity globally to further optimise flight operations and support a host of new safety applications – as well as delivering even more savings for the industry.

$1.1bn
savings from improved ATC

$1.9bn
savings from operational efficiencies

*Source: inmarsataviation.com/benefits/heliosstudy
Making a difference in disaster relief

Partnering with Team Rubicon
Disaster relief communications

When natural disasters strike, the frequent loss of terrestrial networks hampers attempts to get help to victims fast. Establishing reliable communications is essential to coordinating relief efforts and keeping emergency responders safe in dangerous, sometimes hostile environments.

Team Rubicon unites the skills and experience of military veterans with first responders, rapidly deploying teams to communities across the globe affected by disasters. Inmarsat has transformed the organisation’s ability to channel their resources and maximise their impact by providing a whole raft of satcom services – IsatPhone 2 satellite phones and IsatData Pro to keep in touch with and track teams on the ground; BGAN and Global Xpress to transmit situational reports and video. When the 2017 hurricane season opened with three catastrophic storms in quick succession, and Mexico City suffered a 7.1 magnitude earthquake, Team Rubicon ran up to 15 simultaneous operations – without a single lost connection.

$175bn
cost of natural disasters in 2016
(source: Munich RE Insurance)
Making a difference in connecting airborne Heads of State
Transforming Personal Connectivity

Head of State and VVIP aircraft communications

In an era of constant political scrutiny via social media and the 24 hour news cycle, Heads of State and senior government officials can’t afford to be offline when they are in-flight. They need ‘office in the sky’ connectivity for multiple devices, voice and video, secure VPN, as well as IP TV and streaming services, so they can stay informed and respond effectively to fast-moving events.

Inmarsat Global Xpress delivers seamless, reliable high-speed broadband wherever they fly. Combined with Eclipse’s Aero+ Flexibility solution, bandwidth can be assigned to different zones in the plane – for example, accompanying journalists can pay to access data or the whole allocation can be directed to the HoS if they are handling a crisis – all without impacting safety services in the cockpit. So today, global leaders are travelling safe in the knowledge they will never be in the dark.

inmarsat.com/gx-government
Making a difference in airborne surveillance

Partnering with Cobham Satcom AnsuR
Airborne surveillance

Tactical Unmanned Air Vehicles (UAVs) are widely used for surveillance – by military forces, safety and security organisations, and many enterprises. But LALE (low altitude long endurance) UAV operators have faced frustrating limitations because the satellite technology that could extend sorties beyond line of sight (BLOS) has been too big, heavy and power-draining for the compact airframes.

Until now. Inmarsat SB-UAV couples a massively reduced SWaP terminal with SwiftBroadband always-on data up to 200 kbps – with the only limit being the UAV’s range. Compression software makes it possible to send high quality video in real-time, for full and immediate situational awareness. SB-UAV is transforming airborne communications, no more so than at sea where only satellite networks can reach.

1.45kg
weight of the Cobham AVIATOR UAV 200

6.1kg
weight of competitor product

inmarsat.com/sb-uav