

Communications

Emerging technology
and travel management

Blockchain, chatbots, machine learning, virtual reality (VR) and the Internet of Things (IoT) are among the emerging technologies capturing the imagination of the business travel community. These innovations have the potential to be truly disruptive forces. But precisely how they will change corporate travel, and how buyers can prepare, isn't yet clear.

This series of *Inform* reports explores how these technologies can interact with six aspects of travel program management: [sourcing](#), [policy](#), communications, duty of care, payment and expense, and performance management.

We'll help you understand how these emerging technologies can deal with some of the challenges you face in managing different parts of your travel programs.

This report takes a closer look at how emerging technologies like machine learning, chatbots *et al* can transform travel communications. Today's tools can deliver effective, personalized messages to travelers, engaging them at exactly the right moment and giving travel managers new ways to encourage engagement and compliance.



Comms

Sourcing

Policy

Duty of care

Payment

Performance

Technology upgrades traveler engagement

A new wave of technology tools is already enabling travel managers to engage with their travelers and other key stakeholders far more effectively. As technologies like machine learning and blockchain become more established, they offer greater opportunities for messages to be:



Faster



More personalized



**More persuasive,
yet leaving travelers
feeling firmly in
control**



**Always delivered at
the right moment
through the right
channel**



**Delivered
at a lower cost**

You'll be increasingly able to construct and deliver communications that carefully and cleverly steer travelers towards decisions that drive savings and keep them happy, safe and secure.

Join in or lose out

The sophisticated communications tools now becoming available to travel managers are what the world's largest brands have been using for some time to win consumer sales and build loyalty.

Travel suppliers are now deploying those same technologies to talk to, influence and capture the attention of your business travelers – regardless of whether the brands sit inside your managed program or not. If travel managers fail to respond, and do not adopt the same tools to engage with their travelers, they'll lose influence over buying decisions, diminishing the effectiveness of the travel program.

Read on to find out how machine learning, bots, blockchain, virtual/augmented reality and the Internet of Things will all help you to engage with your travelers as consumers. Learn how you can employ these technologies to keep travelers informed and encourage them to adopt your program's preferred policies.



Machine learning – Personalize, listen, automate

What it all means

Artificial intelligence

When technology performs a human function.

Machine learning

A form of artificial intelligence, where computer software improves its own performance by autonomously learning from the past.

Machine learning will enable travel managers to take three massive steps forward in the way they communicate with their travelers.

From mass to personalized messages

Remember how travel managers used to communicate news and policy developments to their travelers? By communication *en masse*: the same messages to everyone, no matter how relevant or not. They would send an email to a wide distribution list, or maybe even printed a newsletter. It was easier for travelers to ignore these communications rather than spend time looking through them for content that was important or relevant to them.

Today, machine learning has already made it possible for travel managers to communicate directly with travelers as individuals, basing messages on travel patterns, booking behavior and personal preferences. And because the message is totally tailored to the individual, it's always relevant and should be more persuasive.

What's more, travel managers can now communicate with travelers at exactly the moment when the message could have the biggest impact, such as when they're booking their trip or when using a particular service.

Two approaches to compliant behavior

With the help of machine learning, understanding traveler booking behavior and personal preferences enables targeted communications to finesse compliant behavior through incentives and deterrents:



Incentive

Offer travelers the choices they like, and they'll select them.



Deterrent

Use a traveler's booking history to alert them about their previous non-compliant or costly choices.

A different way to listen

Communication needs to be two-way. Travel managers need to know what's on their travelers' minds; they need to listen to travelers. Using machine learning techniques, sophisticated sentiment analysis of everything from traveler comments on messaging tools to frequent Q&A requests provides an early warning system for problems in your travel program. It also shows what's working well.

Speed through automation

Machine learning is helping to automate costly and time-consuming communications tasks. Increasingly, automation can plan, write and translate messages. Automation saves time and frees up travel managers to pursue more strategic activities.

Save time

by automating marketing to travelers



Let machine learning take the strain:

- Use a machine learning-based tool to analyze what you want to communicate.
- It will break the communication down into a series of key messages.
- The tool will automatically plan, write and deliver a series of communications across various channels, adjusting the messaging to make it relevant to each employee.
- Communications will be delivered in the first language of each employee.



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Machine learning – Personalize, listen, automate

Improve compliance through contextual messaging



Help travelers make the right choices:

Machine learning can help you craft messages that alert travelers to normal booking behavior, i.e. what everyone else is doing.

- Encourage travelers to be more cost-conscious: *“85% of your colleagues have booked a lower hotel rate at this location.”*
- Steer travelers to safer ground transportation options: *“95% of your colleagues say it’s safer to travel downtown from the airport by taxi, not train.”*
- Give travelers convenient choices: *“This hotel is right across the road from the office and your colleagues rate it 4.8 out of 5.”*

Reduce traveler stress with personalized, in-policy recommendations



Here’s how:

- Compile as much information as you can about individual travelers – with their permission.
- Send them automated and targeted messages based on what you know about their preferences, e.g. message them during the booking process with hotel choices that include a gym.
- During the trip, let travelers know about nearby restaurants serving their dietary requirements.
- Ensure that these messages only make recommendations within policy or within budget.

Save money by sending your travelers trip budgets



As travelers start the booking process:

- Message them with an accurate trip budget, created by machine learning analysis of thousands of trips and pricing points.
- Give travelers the power to make their own travel choices, but within that budget.



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Machine learning – Personalize, listen, automate

Tackle problems early by listening to your travelers



Here's how sentiment analysis can help:

- It finds patterns in what employees write about their travel experience on enterprise messaging platforms (like Slack) or social networks (like Yammer).
- By incorporating translation tools, it can capture feedback from all travelers.
- It will alert you to any emerging problems such as a hotel chain or property that's attracting a lot of negative comments.
- You can apply this approach to your travel FAQs too, especially if you're using a policy Q&A bot.
- High levels of enquiries about a particular subject show where you may need to increase your proactive communication efforts.

Improve compliance with timely and relevant messages



With machine learning insights you can:

- Prompt employees to consider a better option before confirming a booking.
- Suggest variations to a planned itinerary, such as a different flight time, using machine learning to predict the cost benefits.

Improve compliance with personalized dashboards



Help travelers understand their travel impact:

- When employees log on to the company booking tool, display a dashboard detailing their booking behavior.
- Include information like total spend, bookings made outside policy, average number of days booked in advance and missed savings.
- Show how these figures benchmark against the company norm.



Blockchain – the ultimate personal library

What it all means

Blockchain

A shared ledger, or distributed database, in which information is verified and permanently stored by a large number of independent people (called miners).

Cryptocurrency

A digital currency that is generated and transferred using cryptography, a technique for transforming transmitted data that makes it hard for unauthorized users to decipher.

Smart contract

A self-executing contract triggered by a set condition.

Communication to travelers is much more effective when it is targeted, and personalized messaging is the best way to do this. But this would require you to hold a lot of information about individual travelers, such as their past booking behavior and travel patterns. And it would need travelers to submit additional information about their personal preferences. Assuming they are happy for you to compile this information in the first place, a blockchain-based data storage system will show travelers you are serious about keeping their data secure. Blockchain enables more effective communication by persuading travelers to let you to store the information you need about them, so you can send them the messages they want.

It may be easier to get approval to deploy blockchain to improve traveler communication by taking a less invasive approach, known as “self-sovereign digital identity.” In this case, a traveler’s personal data is not stored on a blockchain; all that’s stored is the proof of a traveler’s identity. The traveler controls their identity information, when to share it and with whom.

Help travelers make informed choices

by sharing extra information about suppliers



Create an accommodation blockchain which:

- Stores information about every hotel property – both inside and outside of your program.
- Presents opinionated content customer reviews and safety/security assessments and accreditations.
- Also includes information about alternative accommodation options like Airbnb.

Promote personalized messaging

by showing how blockchain handles personal information



Position blockchain as an enabler of personalized messaging:

- For each traveler, create a blockchain record showing which travel suppliers and service providers hold what personal data about them.
- Give travelers secure access to their personal data blockchain.
- Explain why blockchain is so secure.

Reduce non-compliance

by using blockchain-based smart contracts



Use smart contracts to deliver non-compliance alerts:

- Policy rules are stored within a blockchain-enabled smart contract.
- If a traveler breaks the rules, for example by booking a hotel that’s too expensive, it triggers the smart contract to automatically alert the travel manager.
- The traveler also receives a warning that their policy violation has been detected and reported, and that they will need to submit a new travel request.
- The smart contract doesn’t simply block non-compliant activity, it uses messaging to engage travelers with the company’s policy.



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Bots and chatbots – Talk to your travelers

What it all means	Bot Software fulfilling an automated task.	Chatbot A messenger app or a virtual assistant programmed to provide personalized responses and perform a variety of other tasks based on machine learning, thus substituting a human.	Natural language processing The area of Artificial Intelligence that helps computers understand and analyze human speech.

Chatbots are no longer tomorrow’s technology. Sixty percent of U.S. travelers already use voice-controlled digital assistants, like Alexa, to access travel information.¹ While they’re being used mainly by leisure travelers, they are growing in popularity among business travelers, too. A big plus for the travel manager is that chatbots can be configured to deliver only policy-compliant choices in their communications to travelers.

But bot technology is about more than chat and digital assistants. It can also automate routine travel management communication tasks, like answering policy questions. And it can trigger alerts to travelers – and to suppliers and travel managers themselves.

Support travelers by communicating via voice-controlled digital assistants



They can do so many things, including:

- Answering simple traveler questions about arrival and departure times, hotel reservation confirmations or car rental pick-up addresses etc.
- Booking hotel rooms.
- Providing destination information.
- Sending travel alerts, including flight disruptions (both predicted and actual).
- Receiving traveler requests for help.
- Asking travelers to check and send their location in emergencies.

Save money with messages managing booking and payment



Bots can remind travelers to:

- Book flights if they haven’t done so within a week of registering for a group event.
- Arrange a hotel room if they didn’t do it when booking their flight.
- Pay their monthly settlement to a corporate card issuer.

Better travel management thanks to a diary travel alert bot



Guarantee efficient and compliant bookings:

- Once a meeting requiring travel is scheduled in a diary, the bot suggests a trip itinerary.
- It ensures all suggestions are within travel policy.
- It encourages the traveler to book earlier, when prices are likely to be lower.

Self-service trip management with Alexa

Business travelers using BCD Travel’s TripSource® platform are able to use voice services on Alexa-enabled devices.

- The new voice-enabled functionality on Alexa allows self-service trip management, which includes confirming hotel bookings, flight times and car rental pickups.
- The users are able to grant access to their itinerary to others who use a shared Alexa device.
- The functionality is available on Alexa-enabled devices, including the Amazon Echo, Echo Plus or Echo Dot – as well as any smartphone loaded with the Alexa app.
- BCD will extend these voice services to other virtual assistants, such as Google Assistant and Apple’s Siri.



¹Phocuswright, The State of Voice in Travel, 2018



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Bots and chatbots – Talk to your travelers

Save time with a travel policy and process query bot



You can spend less time answering simple questions if you:

- Build a database of frequently asked questions and appropriate answers.
- Configure a bot to send automated answers to typed policy queries from travelers.
- Enhance the service by answering voice queries with the help of natural language processing.
- Add links to “how to” videos for processes like using the online booking tool.

Improve data quality by introducing management information bots



A bot can make you faster and smarter:

- Use one to query your data sources by text or voice instead of hunting through spreadsheets.
- They're ideal for answering questions from internal stakeholders.
- They can alert you to significant changes in activity, like a big drop in the use of a preferred hotel.
- They can also highlight the non-compliant choices being made by individual employees.

Enhance supplier performance with dynamic communications



A bot will tell suppliers in real-time if:

- Their satisfaction rating among travelers falls below a minimum standard.
- They are not offering enough hotel bookings at the negotiated rate.
- The conditions identified in service level agreements are not being met.



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Virtual and augmented reality – Enhancing or replacing business trips

**What
it all
means**

Augmented reality

Using virtual information, like holograms or GPS information, to enhance the real world.

Virtual reality

An immersive computer-generated environment, which can be experienced by a person as if they are really there.

Augmented and virtual reality are essentially communication technologies. They can be used to enhance interaction with travelers. Since the purpose of most business travel is communication, these technologies can also replace some travel.

**Prepare travelers
with even richer content**



Bring your managed travel program to life, using VR/AR to:

- Create interactive travel guides, delivering a virtual experience for all the key stages in a traveler’s journey, helping them to navigate airports and their destinations.
- Showcase preferred suppliers with virtual tours of hotel amenities or aircraft interiors.
- Build ultra-realistic booking and expense tutorials.

Why travel?

Using VR, travel won’t be the only option.



To be more productive, a traveler may:

- Meet colleagues or even clients virtually when face-to-face isn’t necessary.
- Attend conferences and training virtually.

Internet of Things – Connect while travelers are on the move

**What
it all
means**

Internet of Things (IoT)

A network of connected intelligent devices using the Internet to communicate and share data.

Telemetric systems

The systems that remotely collect and transmit data.

The Internet of Things makes it possible to transmit richer and contextually relevant data to and from travelers. From optimizing passenger flows at airports to improving hotel guests’ experience via ‘smart’ rooms, the world of connected devices creates an informed journey that will take personalization to a whole new level.

**Improve the travel
experience
with on-trip messaging**



Use the IoT to enable relevant messaging:

- With a traveler’s agreement, beacons and telemetric systems can track their movements, so you can send them the right information when they most need it.
- You can warn travelers about flight cancellations and other disruption or send them destination advice.
- Airlines can send travelers boarding notifications and directions to the gate.

**Reinforce policy
with on-trip support**



Keep travelers informed with timely and relevant messages:

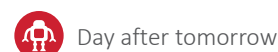
- Use the virtual personal assistant (VPA) in a hotel room to let travelers know on arrival which services are included in their rate.
- The VPA can also tell travelers access to the mini-bar is blocked – and blocks it!



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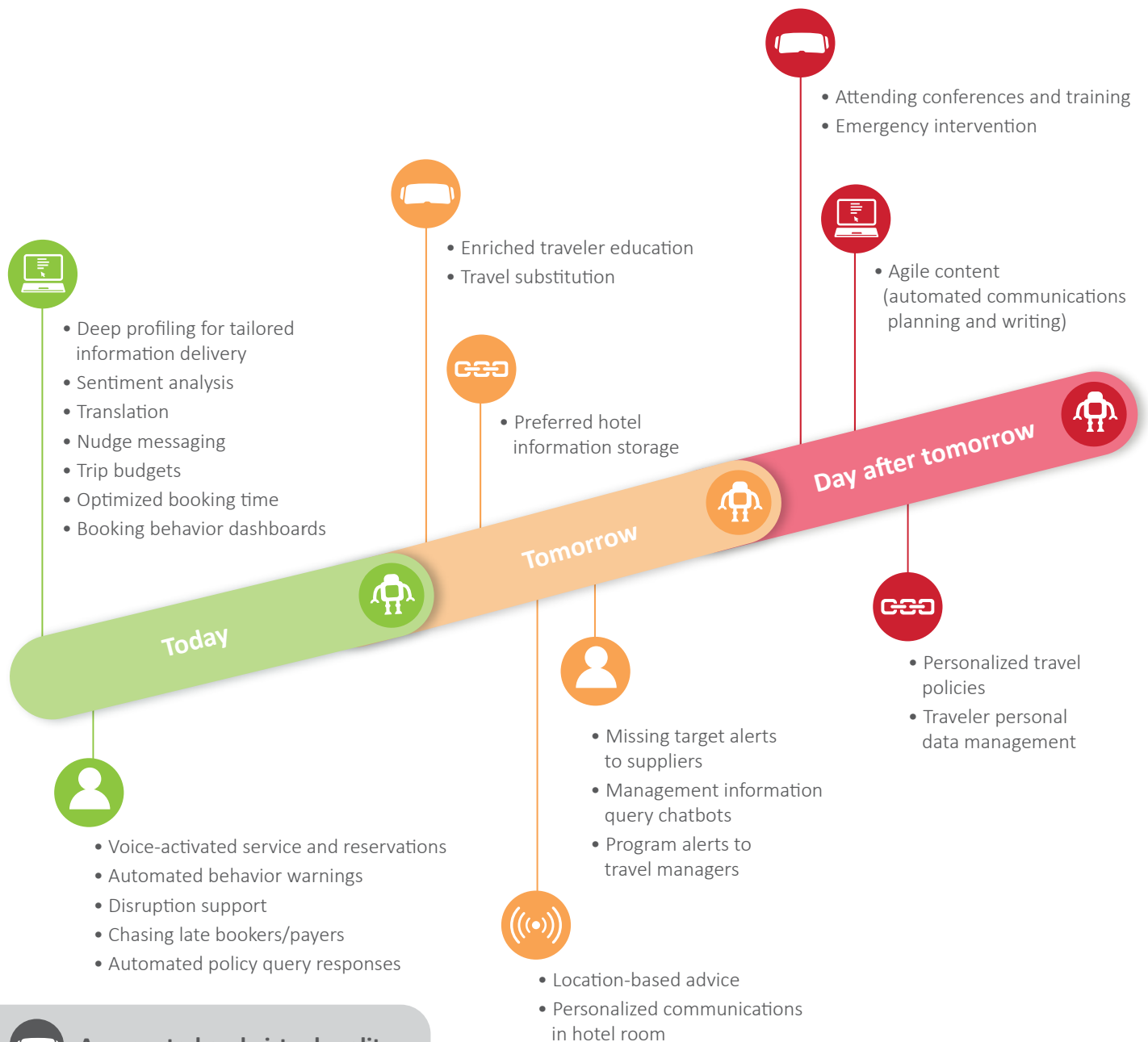


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How emerging technology can transform travel communications



- Augmented and virtual reality**
- Blockchain**
- Bots and virtual assistants**
- Internet of Things**
- Machine learning**

This is how we see the application of these emerging technologies to travel policy. But things are changing fast, and some developments may happen more quickly than we expect.

Challenges

Emerging technologies are revolutionizing how and what travel managers communicate to their travelers. But innovation also brings a number of challenges.

Giving travelers the right information



- The new technologies often decide automatically what information to share with travelers (or other stakeholders like suppliers), and then provide it automatically, too. But who ensures the information is accurate, the messages are relevant, and the frequency of communication is proportionate? Bombarding travelers with automatically-generated messages can prove to be counterproductive.
- As machine learning fundamentally hands the communications decisions over to technology, it's essential to monitor and sense-check what is being sent out.
- Be especially careful if operating in a multinational environment. Make sure the messages make sense in every market, and not just in the one where you live. And, if different languages are involved, ensure the translation is accurate. It's better to have translations checked by someone reading in their native language.

Data privacy



Highly personalized communications create new challenges for data protection. Some employees, for example, are uncomfortable about sharing location data. You will need to understand your company's philosophy towards balancing personalization and privacy. And you will need to be clear on the legal aspects of data privacy, too.

Working with chatbots



- Chatbots are becoming increasingly sophisticated. But natural language processing is very difficult to get exactly right. Keep checking how well your chatbot understands what users say, and how intelligibly it responds.
- If a chatbot keeps making mistakes, users will quickly lose interest. Make sure a human assistant can step in if the chatbot can't help.
- Every successful response from a chatbot raises the expectation among users that it can solve all their needs. It's important to manage user expectations, as it will still be some time before chatbots can be the answer to everything.
- Automatically redirect more complicated requests to an agent.

Technology isn't always the answer



- Incredible as technology can be, often a human communicates better – after all, the advantages of human interaction may be why your people are traveling in the first place.
- Not all your travelers are comfortable talking with a machine. You may need to offer alternative communication methods for different audiences, reflecting, for example, differences in age or culture.

Are you agile enough?



- Your business may need an updated digital platform to handle and integrate the new generation of communications tools. Work with your IT team to understand what's possible using the current infrastructure, and what will be needed to support more advanced communications.
- You may have old legacy and newer digital technology running in parallel for a while. It's important to check you have the funds needed to invest in the transition.



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Getting the best from emerging technology

It's time to get engaged

- Many of the innovations you've read about here are already available. It's time to investigate them.
- Don't get left behind. For example, voice digital assistants are taking off fast. If you don't offer a managed version within your travel program soon, your travelers may seek that kind of technology outside your program.
- These technologies can improve compliance, for example, by deploying chatbots that only offer booking options inside policy.

Take it step by step

- Don't rush into deploying these technologies. Plan, prepare and only introduce new communication tools when you're confident they are fully functioning.
- Test new tools on small pilot groups before going enterprise-wide.
- Start with innovations where results are fast and easy to demonstrate.

Don't rely just on technology

- Technology will help you communicate faster and in a more personalized way, but it's no substitute for a well-planned communications strategy. You still need to understand what travelers want, plan campaigns, monitor feedback and so on.
- Maintain traditional communications channels, including face-to-face inductions with new employees or meetings with your most frequent travelers.

Get to know the BCD Travel Research & Intelligence team



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About BCD Travel

BCD Travel helps companies make the most of what they spend on travel. For travelers, this means keeping them safe and productive, and equipping them to make good choices on the road. For travel and procurement managers, it means advising them on how to grow the value of their travel program. In short, we help our clients travel smart and achieve more. We make this happen in 109 countries with almost 13,500 creative, committed and experienced people. And it's how we maintain the industry's most consistent client retention rate (95% over the past 10 years), with 2017 sales of US\$25.7 billion. For more information, visit www.bcdtravel.com.