2016 MARKETING TECHNOLOGY LANDSCAPE

What organisations need to know to make sense of an increasingly complex marketing technology ecosystem

CACI

SUMMARY

In today's marketplace it may appear that a single technology player can offer all the capabilities needed for an integrated customer experience. Our experience is that this is not true and that you're far better off selecting appropriate technology from a range of vendors – even though this may require getting to grips with a complex marketing ecosystem.

In this paper, CACI will navigate you through the marketing technology landscape and provide a landscape – our Marketing Technology Landscape – for architecting your own solution. We'll help you understand the importance of:

- the right blend of technology;
- the right data network;
- solid integration.

The benefits of using the Marketing Technology Landscape to create an integrated customer experience are huge. They include increased customer spend, loyalty and satisfaction. Furthermore, the customer journey will be improved by good technology implementation.

MARKETING TECHNOLOGY LANDSCAPE AND TECHNOLOGY CAPABILITIES

CACI developed its landscape for marketing technology specifically to support marketers, customer experience experts and IT professionals. The landscape covers all major areas of technology investment required for delivering an integrated customer experience across multiple channels.

Each section of the landscape represents a collection of technology capabilities that today's businesses require, namely:

- channel and communications;
- data movement and integration;
- communication management;
- analytics and reporting;
- identity management;
- infrastructure;
- your own back-office business systems.

USING THE MARKETING TECHNOLOGY LANDSCAPE

The process of using the landscape, although complex, should not be daunting. It centres on:

- defining your needs;
- understanding the technology and vendors;
- implementing and integrating your chosen solutions.

CACI consultants can guide you through this process.

Each individual component of your marketing technology structure needs to fulfil its role in:

- collecting;
- analysing;
- decisioning;
- presenting information to the customer.

And to do these things well, you'll need whole host of different technical capabilities including:

- databases;
- campaign management platforms;
- content management systems;
- analytics tools.

There will also be legacy data sources to consider, as well as the complex configuring of integration points and workflows.

MAKING A CASE FOR THE MARKETING TECHNOLOGY LANDSCAPE

Multiple technologies bring success

Research by Econsultancy and CACI shows that successful companies build their customer experience using multiple platforms. The mere existence of so many channel-specific vendors, selling multiple platforms for each channel or set of channels, underlines the almost limitless possibilities.

Campaigns benefit from data

With so many technology choices available, savvy companies know they must not only choose the most appropriate systems, but also get them communicating with each other as part of a single digital nervous system. Letting central data and decisioning tools drive communications in each channel in real-time adds value to campaigns.
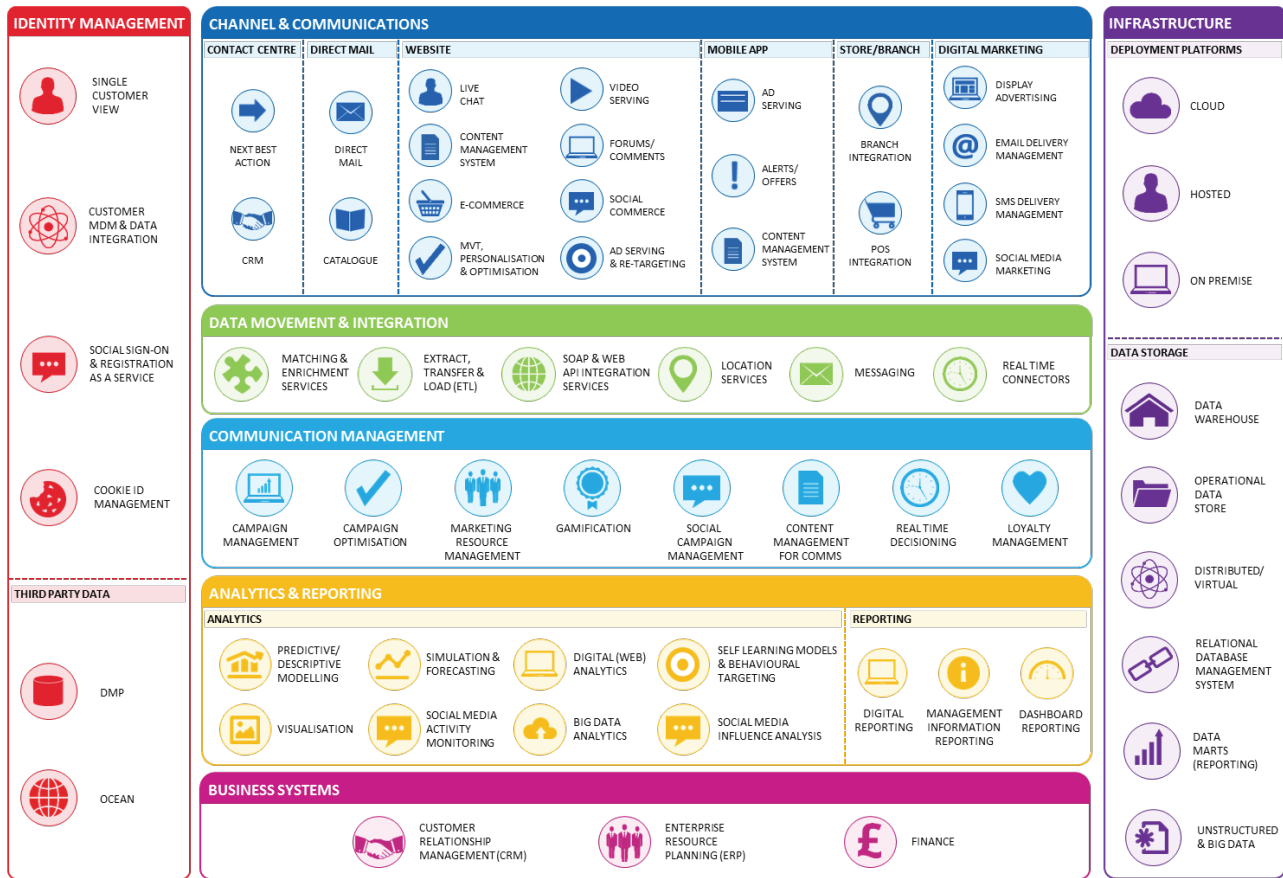
Only then can an action taken by a customer in one channel trigger an instant reaction in another, or can an identical personalised offer or a next-best-action be offered to a single customer on all channels.
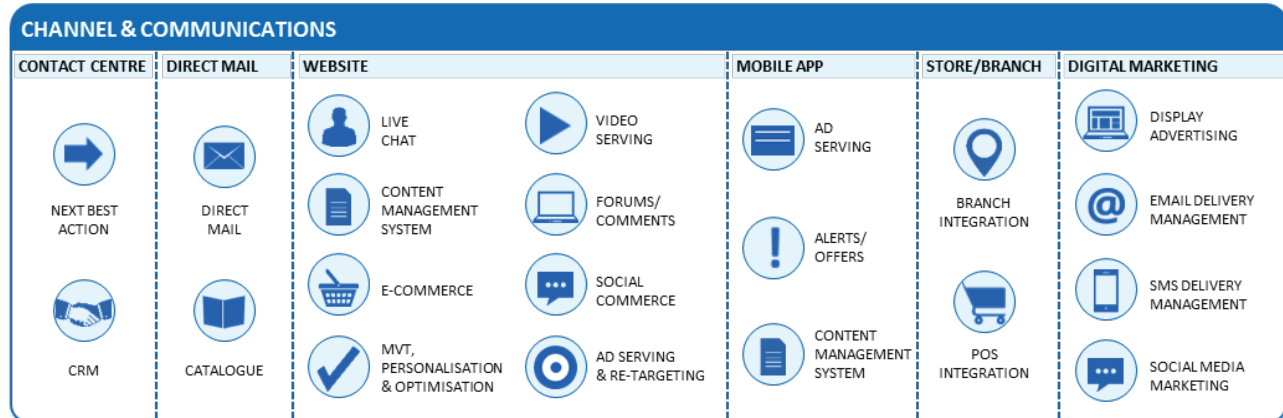
Customers' expectations must be met

Consumers don't see themselves as either online or offline customers, and neither should brands. The same individuals switch between channels, taking with them their high expectations of a brand. They demand an instant, easy, personalised and ultimately satisfactory experience. There can be no more weak channels, only one truly 'joined up' real-time experience. This is the new norm.

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TECHNOLOGY GROUPINGS WITHIN THE MARKETING TECHNOLOGY LANDSCAPE

Each coloured section of the Marketing Technology Landscape represents a technology capability, with the tools to deliver it grouped together. The business benefits of each capability and its integration are explained in the text below.

IDENTITY MANAGEMENT

- SINGLE CUSTOMER VIEW
- CUSTOMER MDM & DATA INTEGRATION
- SOCIAL SIGN-ON & REGISTRATION AS A SERVICE
- COOKIE ID MANAGEMENT

THIRD PARTY DATA

- DMP
- OCEAN

CHANNEL & COMMUNICATIONS

CONTACT CENTRE
- NEXT BEST ACTION
- CRM

DIRECT MAIL
- DIRECT MAIL
- CATALOGUE

WEBSITE
- LIVE CHAT
- CONTENT MANAGEMENT SYSTEM
- E-COMMERCE
- MVT, PERSONALISATION & OPTIMISATION
- VIDEO SERVING
- FORUMS/COMMENTS
- SOCIAL COMMERCE
- AD SERVING & RE-TARGETING

MOBILE APP
- AD SERVING
- ALERTS/OFFERS
- CONTENT MANAGEMENT SYSTEM

STORE/BRANCH
- BRANCH INTEGRATION
- POS INTEGRATION

DIGITAL MARKETING
- DISPLAY ADVERTISING
- EMAIL DELIVERY MANAGEMENT
- SMS DELIVERY MANAGEMENT
- SOCIAL MEDIA MARKETING

DATA MOVEMENT & INTEGRATION

- MATCHING & ENRICHMENT SERVICES
- EXTRACT, TRANSFER & LOAD (ETL)
- SOAP & WEB API INTEGRATION SERVICES
- LOCATION SERVICES
- MESSAGING
- REAL TIME CONNECTORS

COMMUNICATION MANAGEMENT

- CAMPAIGN MANAGEMENT
- CAMPAIGN OPTIMISATION
- MARKETING RESOURCE MANAGEMENT
- GAMIFICATION
- SOCIAL CAMPAIGN MANAGEMENT
- CONTENT MANAGEMENT FOR COMMS
- REAL TIME DECISIONING
- LOYALTY MANAGEMENT

ANALYTICS & REPORTING

ANALYTICS
- PREDICTIVE/DESCRIPTIVE MODELLING
- SIMULATION & FORECASTING
- DIGITAL (WEB) ANALYTICS
- SELF LEARNING MODELS & BEHAVIOURAL TARGETING
- VISUALISATION
- SOCIAL MEDIA ACTIVITY MONITORING
- BIG DATA ANALYTICS
- SOCIAL MEDIA INFLUENCE ANALYSIS

REPORTING
- DIGITAL REPORTING
- MANAGEMENT INFORMATION REPORTING
- DASHBOARD REPORTING

BUSINESS SYSTEMS

- CUSTOMER RELATIONSHIP MANAGEMENT (CRM)
- ENTERPRISE RESOURCE PLANNING (ERP)
- FINANCE

INFRASTRUCTURE

DEPLOYMENT PLATFORMS
- CLOUD
- HOSTED
- ON PREMISE

DATA STORAGE
- DATA WAREHOUSE
- OPERATIONAL DATA STORE
- DISTRIBUTED/VIRTUAL
- RELATIONAL DATABASE MANAGEMENT SYSTEM
- DATA MARTS (REPORTING)
- UNSTRUCTURED & BIG DATA

Channel & Communications

The first technologies grouped together on the Marketing Technology Landscape are those that support channels and communications. Of all the marketing technologies, these have seen the greatest shake-up and expansion following an explosion in consumer channels. This now includes items as diverse as smartwatches and smart TVs – both of which allow your customers to choose when and how they interact with your brand.

Meanwhile many of today's communication tools now serve multiple channels. For instance, major email service providers (ESPs) can provide SMS and display retargeting capabilities as well as email. Similarly a content management system (CMS) may centralise digital content for delivery across mobile, social, email and web.

Capabilities include outbound communications with the customer such as SMS, and inbound channels such as websites or contact centres.

Increasingly brands are using web platforms in both the call centre and retail point of sale (POS). By using the web platform in multiple channels, brands can benefit from shared data and consistent customer experience. This allows brands to easily execute cross-channel customer personalisation based on a single set of rules.

Data Movement & Integration

If you're seeking to build an integrated customer experience, this layer of technology is vital. Sitting invisibly behind the scenes, it connects each part of your solution. For example, it could identify a customer from your database of known customers purely from a tweet.
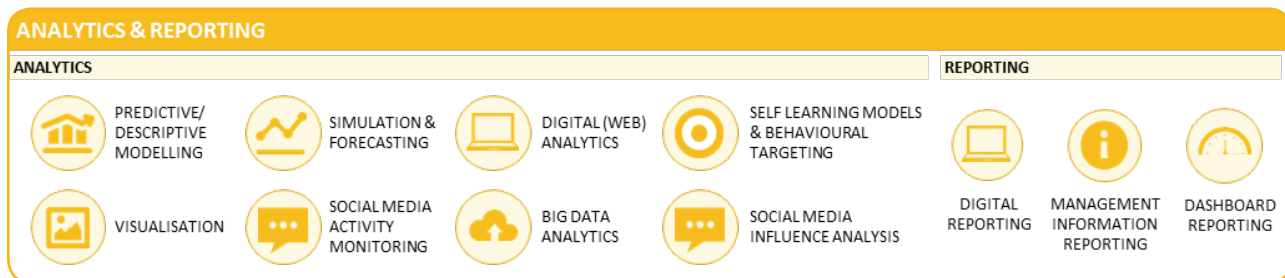
Communication Management

COMMUNICATION MANAGEMENT

CAMPAIGN MANAGEMENT · CAMPAIGN OPTIMISATION · MARKETING RESOURCE MANAGEMENT · GAMIFICATION · SOCIAL CAMPAIGN MANAGEMENT · CONTENT MANAGEMENT FOR COMMS · REAL TIME DECISIONING · LOYALTY MANAGEMENT

Communication Management is the brains behind channel and communications. It can define the rules to manage your customer communications across all channels, help create engaging customer journeys, and enable two-way dialogue.

At a basic level, communication management may determine the timing of your next newsletter or when to send a welcome email to a new customer. More complex applications include giving rewards to loyal customers, or using real-time social data to determine the next-best-action for an individual customer.

Analytics & Reporting

ANALYTICS & REPORTING

ANALYTICS

PREDICTIVE/ DESCRIPTIVE MODELLING · SIMULATION & FORECASTING · DIGITAL (WEB) ANALYTICS · SELF LEARNING MODELS & BEHAVIOURAL TARGETING

VISUALISATION · SOCIAL MEDIA ACTIVITY MONITORING · BIG DATA ANALYTICS · SOCIAL MEDIA INFLUENCE ANALYSIS

REPORTING

DIGITAL REPORTING · MANAGEMENT INFORMATION REPORTING · DASHBOARD REPORTING

Analytics and reporting capabilities enable the measurement and control of your entire marketing technology solution. Using the right tools, you can measure the impact of each stage of a customer's interaction with your brand and discover opportunities to improve your communication.

Importantly, Analytics and Reporting should provide a clear view on the ROI you are achieving from marketing and customer experience activities.

Identity Management

IDENTITY MANAGEMENT

SINGLE CUSTOMER VIEW · CUSTOMER MDM & DATA INTEGRATION · SOCIAL IDS FROM SOCIAL SIGN-ON & REGISTRATION · COOKIE ID MANAGEMENT

THIRD PARTY DATA

DMP · OCEAN

Individual customers can be identified across channels or systems. This linkage enables marketers to gain further insights into a consumer's broader set of affinities (i.e. you can find out what they like). A customer's comments on social media can also be included thanks to social sign-on, which connects a customer account with social media profiles.

Infrastructure

INFRASTRUCTURE

DEPLOYMENT PLATFORMS

CLOUD   HOSTED   ON PREMISE

DATA STORAGE

DATA WAREHOUSE   OPERATIONAL DATA STORE   DISTRIBUTED/ VIRTUAL   RELATIONAL DATABASE MANAGEMENT SYSTEM   REPORTING MARTS   UNSTRUCTURED & BIG DATA
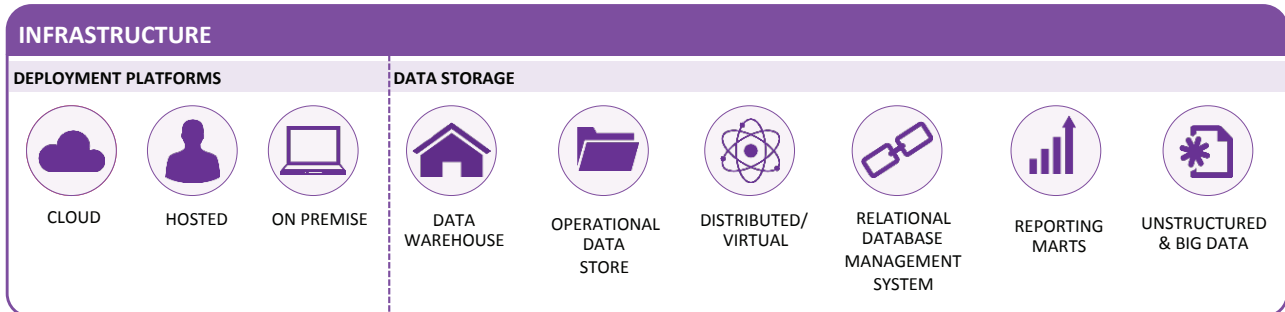
This encompasses the hosting, connectivity and storage of your technology architecture. Each component in your architecture needs to be hosted on a server for processing capacity and access. Connectivity allows systems to interlink and also supports user access to the technology or data.

In recent years there has been an increase in Cloud hosting and storage models being used to provide businesses with scalable, near-unlimited processing and storage capacity on a pay-for-use model.

Despite the benefits of cloud hosting, for compliance, security or control reasons, it may be more appropriate to use your company's data centre or a third-party data centre.

But however you choose to host your technology architecture, it's important the Infrastructure provides the capacity to achieve your business objectives.

Internal Business Systems

BUSINESS SYSTEMS

CUSTOMER RELATIONSHIP MANAGEMENT (CRM)   ENTERPRISE RESOURCE PLANNING (ERP)   FINANCE

The final elements of the landscape are the internal systems that support business operations and they may include finance or enterprise resource planning (ERP) applications.

Internal systems need to be able to communicate with your marketing technology stack to bring reporting and revenue information into the loop.

For example, your marketing Customer Relationship Management (CRM) systems that are used by customer service teams are a vital connection point, as they can provide valuable triggers for marketing communications.

THE MARKETING TECHNOLOGY LANDSCAPE IN ACTION – USE CASES

The examples below draw on CACI's solutions for real clients. They demonstrate the Marketing Technology Landscape in action, building integrated marketing solutions.

1. Consistent Cross-Channel Personalised Offers

Most brands offer some level of personalisation on a single channel. This may be as basic as writing "Hi David" at the top of a marketing mail or showing someone products they viewed on a website.

However, pushing the same personalised message on all channels, using all available customer data was a new challenge for our client. It required a more holistic technology set, which is represented by letters on the Marketing Technology Landscape below. The corresponding text explains how their capabilities were integrated to achieve a business aim.
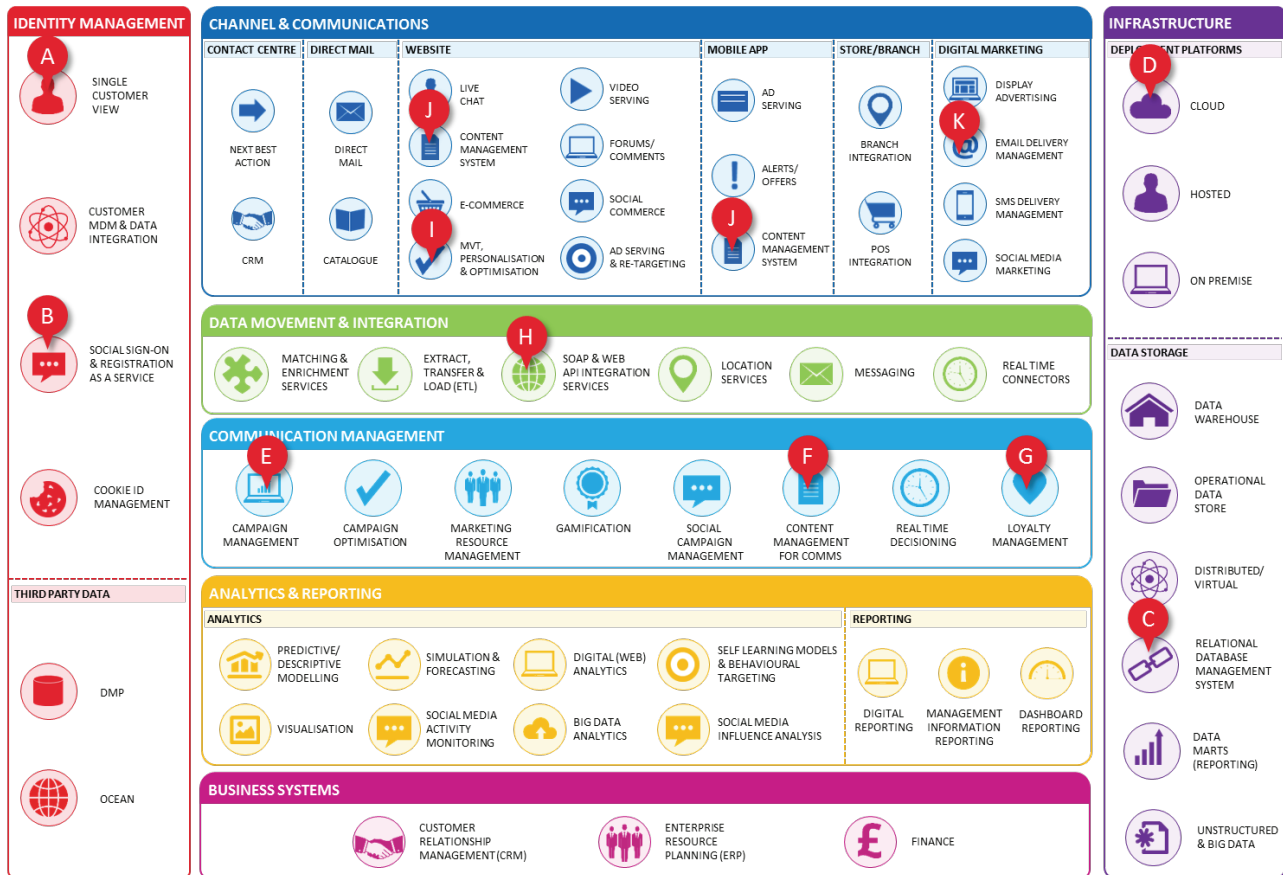
Within **identity management**, CACI built a single customer view (A), which was linked to the customer's social identity provided by the social sign-on platform (B).

All of this data is cloud hosted (D) in a relational data store (C). Campaign management (E) draws on this data to determine which message the customer should receive via the system's central content management tool (F), which then generates email marketing messages.

Consistency is achieved across **channel and communications** by linking the email content management system (J) with the web and mobile content management systems (also J).

Part of the customer experience is a sophisticated loyalty programme (G) – this is part of **communication management**, which rewards the customer with points for completing certain activities. Loyalty point data and activity data can also be used to support the personalisation messages in email (K) and web communications.

Using real-time application program interface (API) connections (H), the data and messaging can be fed through to the website's personalisation tools (I), which then presents the message on web and mobile channels.

Measuring the return on these personalised messages requires **analytics and reporting**, so the web analytics tool (L) is configured to track the response of communications that are personalised. This data is then aggregated and reported through a digital reporting platform that business users can access (M).

CACI's experience has been that this consistent messaging can drive response rates 300% greater than non-personalised messaging.

2. Multi-Channel Lead Management

CACI's brief from a multinational telecommunications provider was to help it win more sales from its prospect pool of business customers. CACI created a multi-channel lead nurture campaign that worked with the client's existing technology platforms.

See how the technologies, marked with letters on the Marketing Technology Landscape, bring capabilities and integration into play. Explanations can be found in the text below.
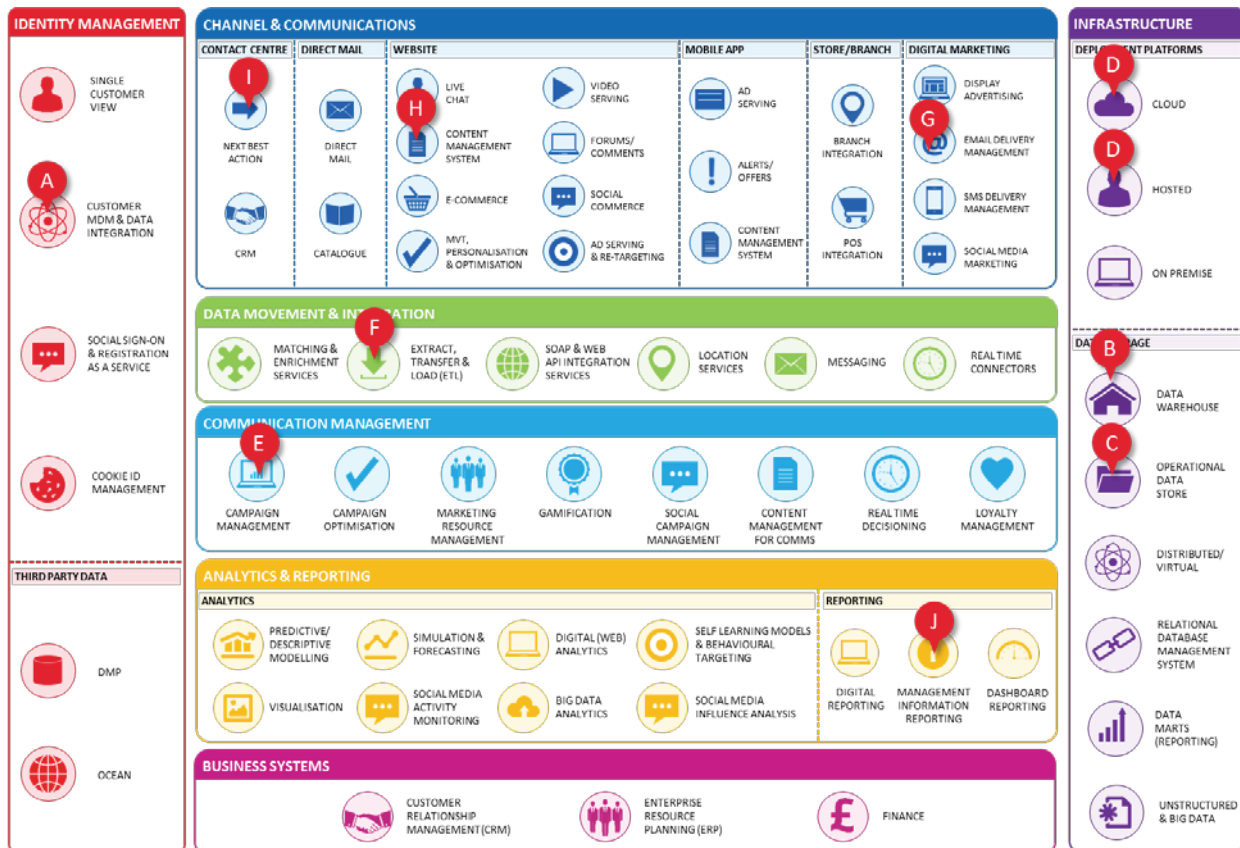
Before CACI's arrival, the telco already had **identity management** capabilities. Its customer master data management solution (A) identified prospect data and stored it in a data warehouse (B). Access to this data was possible through an enterprise scale campaign management system (E) – part of its **communication management** capabilities. All of this was hosted in the telco's data centres (D) – part of its **infrastructure**.

At face value this integrated approach should have been able to help the telco win more sales, but the technology lacked good email communications management and the ability to use the data in an operational setting.

CACI selected a leading email service provider (G) so that the client could quickly send personalised email communications to prospects as part of its **channel and communications** capabilities. A further feature within the email tool enabled the creation and delivery of personalised forms to prospects (H). Cloud-hosted (D), the email solution had its own operational data store (C) for response data.

The new email tool was then integrated into the campaign management tool via an extract, transfer and load process (ETL) (F), allowing **data movement and integration** capabilities. It was also connected to the telco's call centre software to trigger outbound sales calls to hot prospects (I).

Once everything was installed, CACI created a lead nurture programme that used data accessed through the campaign management system to drive a multi-stage email, web and call centre communication strategy.

Emails were sent with a survey link to collect vital information about prospects that could be used to determine messaging to send to the prospect. Customers who were close to their contract renewal date were then passed to the call centre team for a conversation about their contracts.

This blending of enterprise-grade, hosted systems with a lightweight, cloud-based, multi-channel communications tool has been hugely successful. Since implementing the technology and contact strategy the client has enjoyed a 500% increase in conversion rates from prospect to customer.

3. Integrated Reporting & Dashboards

Getting a full view of your business' data is a common business challenge. Due to legacy issues, data is often stored in multiple databases, with siloes of data only aligned to particular channels or service lines. Reporting, especially at a customer or segment level, is a problem. But CACI has developed integrated reporting solutions.

See the technology and the integrated capabilities outlined on the landscape and corresponding text below.
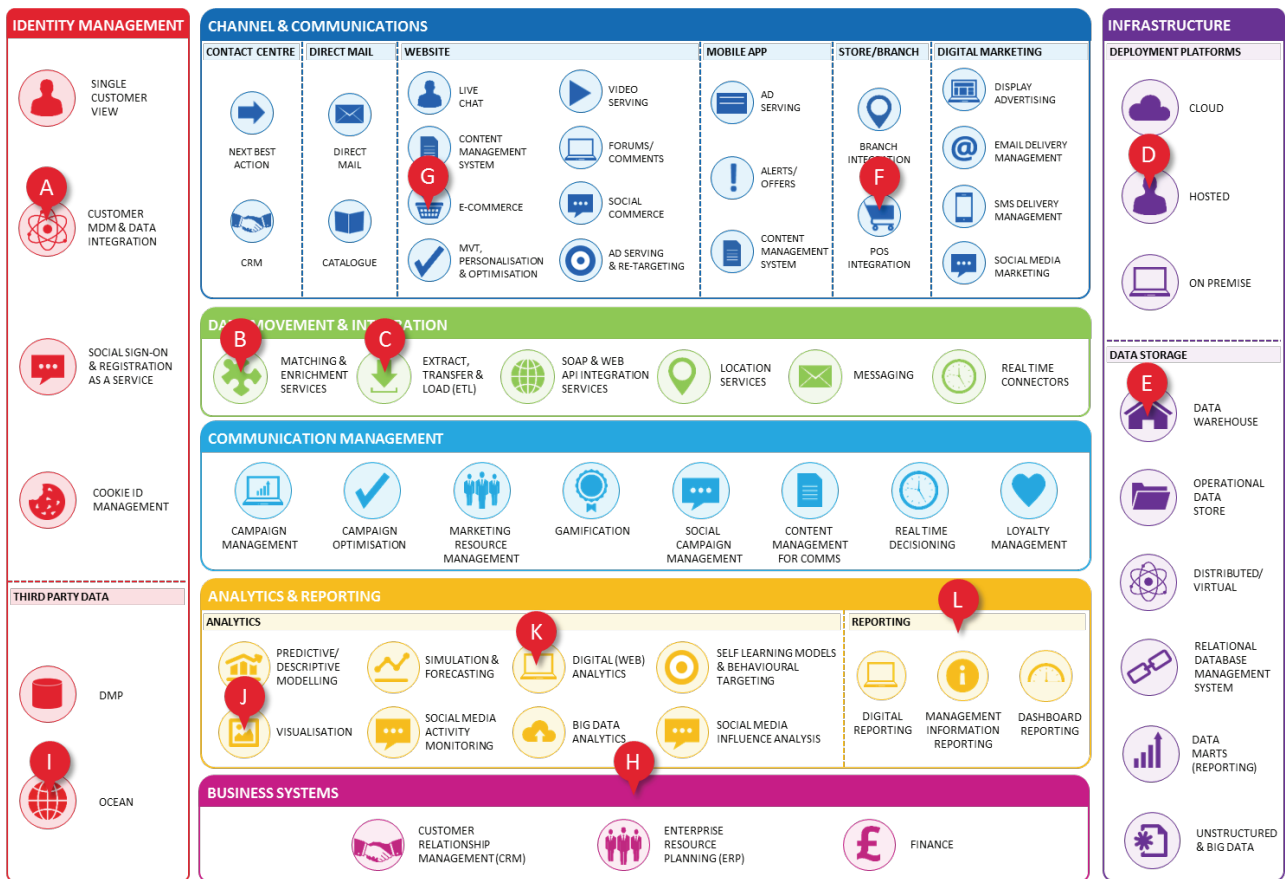
Firstly, customer records are linked by a combination of identifiers (A) as part of the client's **identity management** capabilities. Matching services tools (B) are used to merge customer data from across several sources. And every day an extract transform and load service (C) collects data from multiple sources in the business and brings it together into a single data warehouse which, for security reasons, is normally hosted by the client (D & E). Thus **data movement and integration** capabilities, **channel and communications** capabilities and **infrastructure** capabilities are all working together. Data from the main customer channels are integrated with ecommerce, tills and internal **business systems** (G, F & H).

CACI then uses its ACORN or OCEAN demographic data (see http://acorn.caci.co.uk for more information) to enrich the basic transactional information from these systems, which aids the discovery of profitable and underexploited customer segments.

Using creative data visualisation techniques, CACI can then provide the client with a range of online management reports and dashboards on sales (J & L) bringing **reporting and analytics** into play.
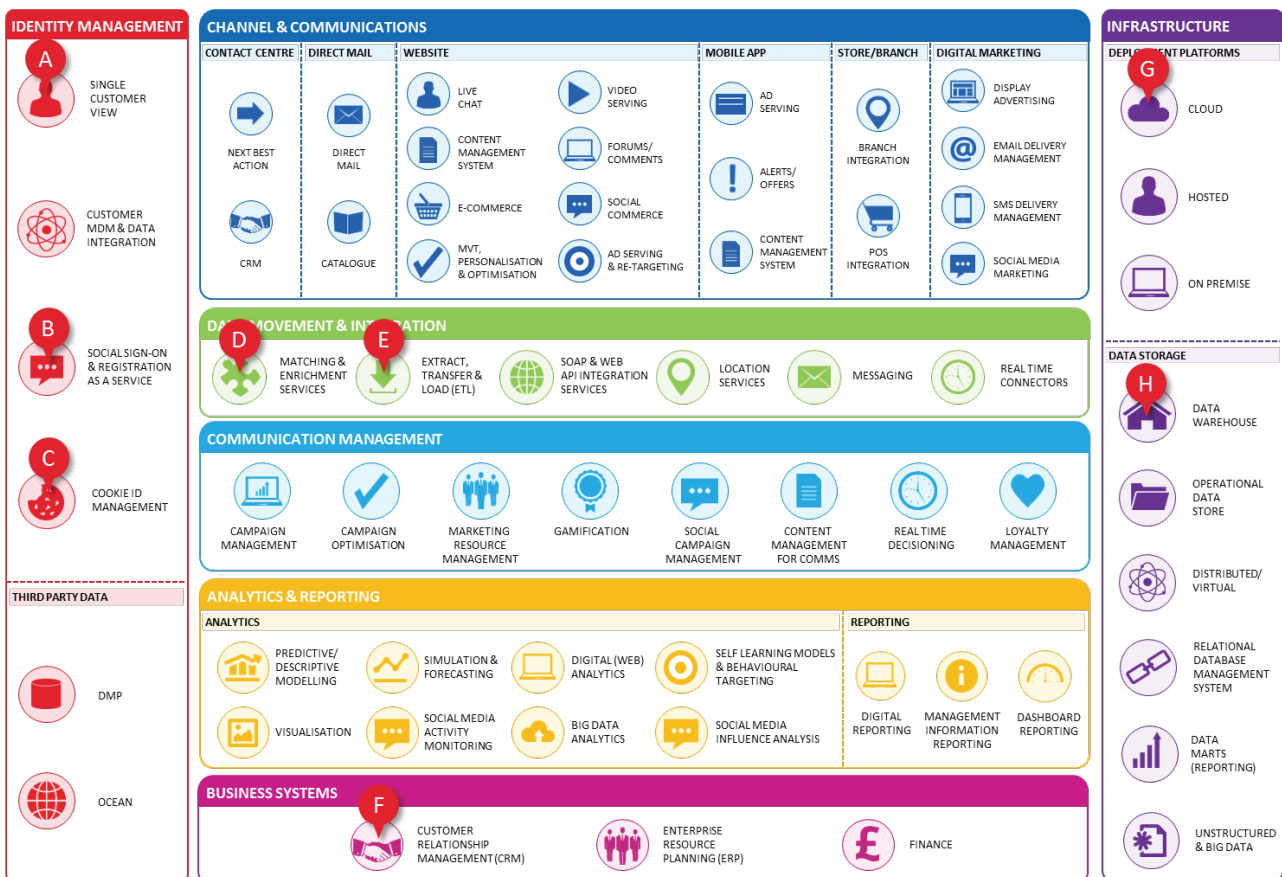
4. Identity Management

Identifying an individual customer across many sessions, channels and systems is key to creating a personalised customer experience. However it is often difficult to achieve because:

- each system generates a different identifier;
- customers enter their details incorrectly;
- home and email addresses change.

So how do you group all of a customer's details together to provide a better experience for the customer and more accurate reporting for you?

The Marketing Technology Landscape and text below shows CACI's solution for a global brand with 250 million fans.

A single customer view (A) is cloud-hosted in a data warehouse (G & H) which also holds identifiers linking individuals to their social network accounts (B) and the cookies (C) left on the website. Thus **identity management** and **infrastructure** are integrated.

Data from the business' CRM platform (F) is loaded overnight into the single customer view, bringing **data movement and integration** into play. Because these types of records may be difficult to match to a unique individual, CACI uses matching technology (D) to find individual people and combine (E) their IDs across the database.

5. Real-Time Abandoned Purchase Follow Up

When one of CACI's financial services clients asked for help in following up on lost leads, we were quick to respond with the latest marketing technology.

The client's problem was that, although customers completed a number of online forms when getting price quotes, the website platform couldn't process the data quickly enough for campaigning purposes. See CACI's solution using the Marketing Technology Landscape below.
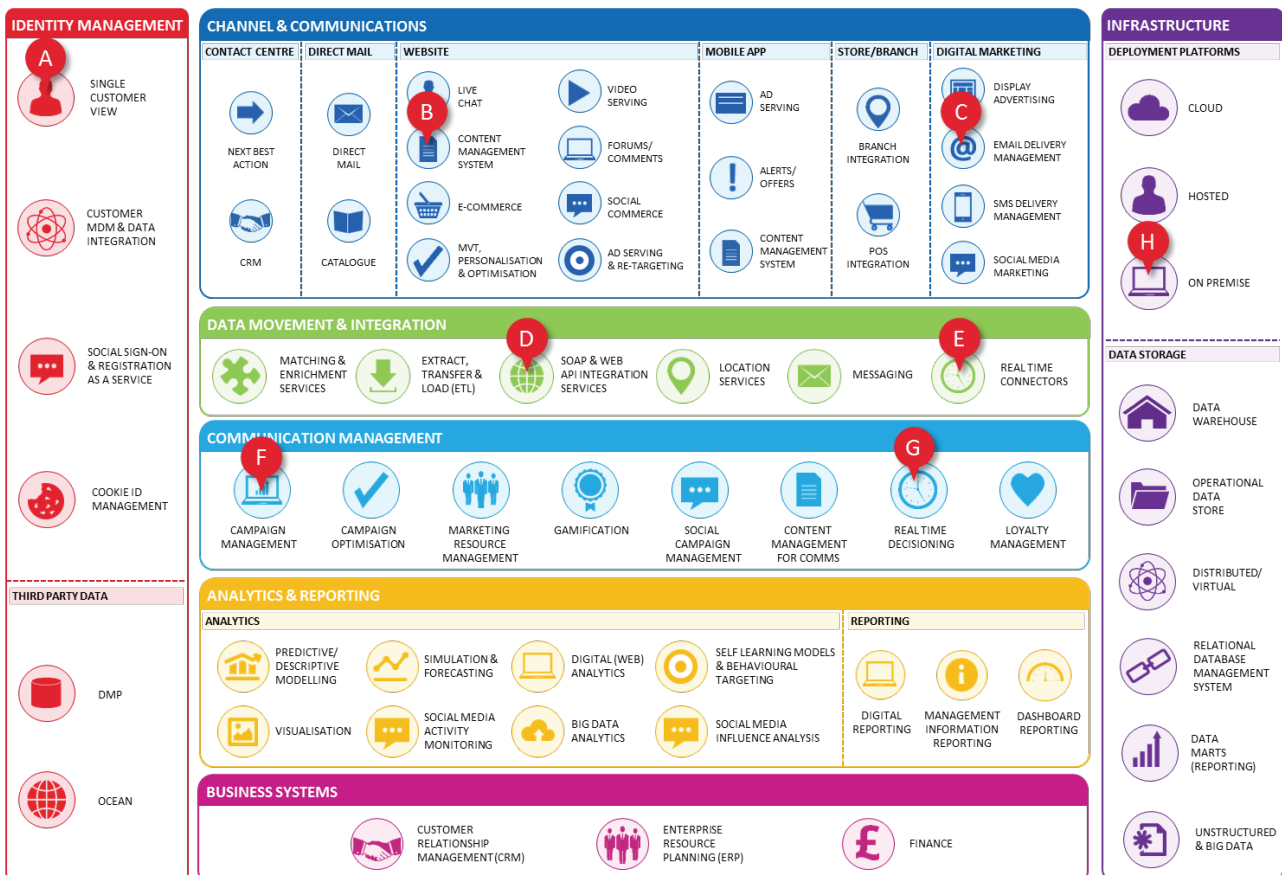
CACI's solution relied on a real-time connector (E) linking the website (B) with a real-time decisioning engine (G). This enabled **data movement and integration** to work with **channel and communications** and **communication management**. The real-time connector used JavaScript in the customer's web browser to capture information entered in real-time.

As soon as the customer abandons the web based quote forms, an instruction is sent using SOAP based web-services (D) to a campaign management system (F).

Data is merged with existing data in the single customer view (A) bringing **identity management** into the solution. All of this is hosted on premise (H) by the client in their data centre to insure fast transfer of data and complete security.

The final part of the process is the instruction to send an email with the appropriate personalised follow-up offer to the customer (C).

Overall this new technology helps CACI's client eliminate 36 hours of enterprise data processing. Follow-up messages can now go out within 5 minutes of the client abandoning interaction with the website.

GETTING STARTED

Every company is unique and is valued by their customers for different reasons. To create the right customer experience platform for your customer we recommend the following activities:

1. Consumer Insight – use your existing data to understand your customers, their behaviour and what opportunities exist

2. User Research – speak to your customers to understand what they expect from your customer experience

3. Competitor Analysis – learn not only from what your competitors are doing, but seek to learn from industry leaders

4. Data Ecosystem – map out where data is generated, stored and used in your organisation

5. Capability Assessment – use the technology landscape to map out the existence and sophistication of your customer experience platform

6. Roadmap – plan out how you will transform your current capabilities to the platform required by your customers

7. Quick Wins – identify and deliver the quick wins to prove the business case for change and build momentum around the customer experience

Should you require help in getting started, contact David Sealey (dsealey@caci.co.uk).

CACI CASE STUDIES

Client	What we did	Outcome
	CACI designed and built an integrated web and campaign management capability for Chelsea Football Club. It includes a single customer view with social media integration.	• 60% improvement in campaign results
	As Vodafone's global technology partner, CACI built a lead nurture and management capability that integrated with Vodafone's existing campaign and data management tools.	• 500% uplift in conversion rate • 50% reduction in cost
	CACI also rolled out its email template manager to improve operational efficiency. EDF has its database and marketing technology hosted and supported by CACI. This infrastructure provided the means for EDF to rapidly launch a promotional programme based around loyalty points.	• Promotional programme achieved 53% of its target in 3 months

ABOUT THE AUTHOR

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David Sealey is Head of Digital Consulting at CACI. David works with organisations to define and implement digital transformation.

Specifically David helps organisations with digital marketing strategy and marketing technology solutions. He has worked across retail, insurance, FMCG and b2b.

ABOUT CACI: EXPERTS IN BUILDING INTEGRATED CUSTOMER EXPERIENCES

CACI has an unrivalled track record in the implementation and optimisation of customer experience and marketing technology.

A few things make CACI special. We are:

- focused on data and analytics – the work we do should drive a measurable return;
- providers of consistent personalised communications across channels;
- digital at heart – we select the best technology on the market to help you create engaging experiences.

To find out more about our services get in touch with David dsealey@caci.co.uk