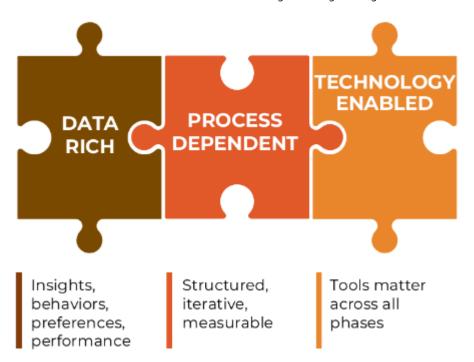
05.Enabling Technologies along the Process **OVERVIEW OF MARKETING-SUPPORTING TECHNOLOGIES**

WHY TECHNOLOGY MATTERS IN MARKETING

From market understanding to campaign delivery, technology is not just an executional tool it is a strategic enabler.

Data is useful in the start and lower part of the process



To make a process works data needs to be consistent and the tools chosen for the job needs to be the best we can achieve.

Each technology plays a role in:

- Segmenting audiences
- Personalizing communication
- Measuring performance
- Automating journeys
- ..

MAPPING TECHNOLOGIES ALONG MARKETING PROCESS



We can find both real technologies (data lakes) and digital tools that aren't technologies per se but are used in the market as such.

Data lakes are repositories of unstructured data, you can put every type of data you want to keep, useful to gather information about context and can helps tools to access data.

There are also internal performance analyzer tools that let your company to integrate data in a powerful way and to do an effective data visualization.

Looking at CRM analytics is useful to understand the data.

To have competitive benchmarking you can use to understand your position in the market.

CDP(Customer Data Platform) contains the data of the customers and ERP is a data management platform(data warehouse of customer data) and is useful for data that expires, in contradiction of CRM and CDP that have long lasting data.

Market research can be done through quantitative means(surveys) or you can have panels of customers that answer some questions that can arose about one product.

You also have some tools to do automatic advertisement campaigns.

Also these tools can overlap in their boundaries and capabilities.

Attribution modeling are tools for online campaigns and used to attribute the right dashboard the right direction.

Marketing modeling works for every dashboard and are able to tell the % division of the budget that is allocated/gained from a campaign. These models are becoming less relevant as they rely on cookies that are becoming obsole/not used anymore.

There are also customer supports tools, as chatbots that can be used to reply to the customers and for the company to have a possibly more complete and broad answer as possible.

NOT ALL TECHNOLOGIES ARE MANAGED IN-HOUSE

05. Enabling Technologies along the Process

TECHNOLOGY	IN-HOUSE?	EXTERNAL PARTNER
CUSTOMER INSIGHT / RESEARCH PLATFORMS	Hybrid	Research agencies / panels (e.g. Nielsen, Ipsos)
CRM / CDP	Yes	Media Agency
CMS / DAM	Yes	Creative agency
MARKETING AUTOMATION	Hybrid	Martech consultants
DSP / MEDIA BUYING	No	Media agency
COUPON & LOYALTY	No	Loyalty providers
WEB ANALYTICS & ATTRIBUTION	Hybrid: analytics in-house, attribution models outsourced	Specialized partners
CHATBOTS & CUSTOMER SUPPORT	Hybrid: traditional customer support in-house, AI chatbot outsourced	Specialized partners
SOCIAL MEDIA MANAGEMENT	It depends	Creative / social media agency or internal team
BUSINESS INTELLIGENCE (BI)	Yes	

CRM/CDP are managed in house as they manage first party data, data used to manage process and extract information. There are some media agency that can helps in extracting value from data but usually it is managed in house.

Coupon and loyalty bonus are usually outsourced as they are not something a company would spend internal resource on.

Web analytics and attribution is usually done in house but usually uses models from other companies, this because there is a conflict of interest if we let the people doing the marketing campaigns also do the models that evaluate also their performance.

CRM AND ERP: HOW MARKETING CONNECTS TO THE BUSINESS BACKBONE

Marketing doesn't operate in a vacuum, it must integrate with enterprise-wide systems like ERP.

ERP

(Enterprise Resource Planning)

FOCUS: Back-office operations

MANAGES

- Orders & supply chain
- Inventory
- Invoicing & payments
- Finance & accounting
- Procurement & logistics

Ensures the company runs operationally, from production to delivery



WHERE THEY MEET

- Salesperson checks CRM for customer interaction → verifies in ERP product availability
- Customer support sees a complaint in CRM → confirms resolution status in ERP
- Integrated data flow = seamless customer experience

CRM

(Customer Relationship Management)

FOCUS: Front-office interactions

SUPPORTS

- Customer database
- Lead & opportunity management
- Segmentation & campaigns
- · Sales pipeline
- Customer service

Supports customer-facing processes across marketing, sales, and service

CRM stores every information related to transactions with the customer. If a sales person needs to talk to a customer needs to know information about them to do not alter their fidelty or to see if a product is available/the product could interest the customer.

THE ROLE OF CRM IN MARKETING

It is a central hub for customer data, every company should have it as it supports Segmentation & targeting, Lead management(potential customer) & scoring, Campaign planning & measurement

Warmup the leads means transforming a potential customer in an effective customer(also called scoring).

FROM CRM TO CDP: WHY EVOLVE?

	CRM	CDP (CUSTOMER DATA PLATFORM)
STORED DATA	Contact details & sales history	Unified customer profile across all systems
DATA PERIMETER	Operates in silos	Integrates data from CRM, website, app, POS, etc.
PERSONALIZATION	Good for 1:1 interactions	Good for scalable segmentation and personalization

USE CDP when:

- ✓ You need cross-channel personalization
- ✓ You manage large data volumes from different sources
- ✓ You want to feed AI/ML models for predictive marketing

The problem of CRM is that it works well in the perimeter of a sales market. If you need data from, for example production or financial area of the company, you cannot reach these data from the CRM.

CDP VS DMP - WHAT'S THE DIFFERENCE?

TYPE OF DATA
First-party, identifiable and
persistent data (e.g., email, customer
ID, known behavior on site/app)

MAIN OBJECTIVE
Build a unified and long-term
customer profile for omnichannel
personalization and activation

DATA LIFESPAN
Long-term: stores and continuously
updates customer profiles

MAIN USERS
Marketing teams, CRM managers,
customer experience teams, IT



TYPE OF DATA Anonymous, cookie-based data, often third-party (e.g., non-logged-in users, external audience data) MAIN OBJECTIVE Build anonymous audience segments for advertising and programmatic targeting (e.g., lookalike audience building) DATA LIFESPAN Short-term: data usually expires after a short time (e.g., 90-day cookies) MAIN USERS Media teams, performance marketing, advertising agencies

CDP stores first party data, persistent data that store information about customer and the objective is to create an interactive view of the customer, can e the central point of the company. DMP uses public data to build anonimous studies to see the behaviour of the group and reproduce it in an advertisement group. Used to try to address to the people characteristics in advertisement.

In a multichannel strategy we use both technologies as usually is more a matter of understanding where to use the tool.

WHAT IS A DATA LAKE?

DEFINITION: A centralized repository that stores structured, semi-structured, and unstructured data at scale and without needing to define the schema in advance.

WHAT CAN YOU STORE IN A DATA LAKE?

Some examples:

- WEB BEHAVIOR (clicks, page views, session data)
- CRM EVENT HISTORY (lead behavior, rep notes, status updates)
- TRANSACTIONAL DATA (purchases, refunds, invoices)
- SENSOR / APP USAGE DATA (IoT, wearable, usage logs)

BENEFITS

- SCALABILITY: Easily handles growing amounts of data
- FLEXIBILITY: Works with any format or source
- ANALYTICS-READY: Feeds AI, ML, dashboards, attribution models
 Data lake are not useful if you want to build on structured data, better use a data warehouse.

DATA LAKE VS DATA WAREHOUSE

DATA LAKE

UNPROCESSED DATA

Ingests raw data in its native format without cleansing or transformation

FLEXIBLE STORAGE

Can store any type of data, without a strict structure

EXAMPLES

- Website behavior
- IoT sensors
- CRM logs
- Images



DATA WAREHOUSE

PROCESSED DATA

Data is cleaned and transformed into a relational format

SCHEMA-DEFINED

Structures data into predefined table and joins

EXAMPLES

- Sales records
- Finance reports
- Subscription data
- · Market research

In data warehouse people just process data and present them to business/marketing to take decisions. Usually you should have both as you store the data in the data lake and store some part of the data in the data warehouse to make further data crunch.

WHEN TO USE A DATA LAKE?

You should consider using a Data Lake if:

- 1. YOU HAVE MULTIPLE DATA SOURCES TO UNIFY (e.g., CRM, web, mobile, in-store data, IoT...)
- 2. YOU NEED TO ENABLE ADVANCED ANALYTICS OR DATA SCIENCE(e.g., machine learning models, real-time dashboards)
- 3. YOU WANT TO MOVE TOWARDS PREDICTIVE MARKETING(e.g., forecast behaviors, personalization in real time)

DATA LAKES ARE OFTEN COMBINED WITH DATA WAREHOUSES.

- 1. Unstructured data goes into the lake to be cleaned & transformed
- 2. Transformed data goes into the warehouse for structured analysis

KEY TAKEAWAY

TECHNOLOGIES THAT ENABLE MARKETING

- MARKETING IS DATA-RICH AND PROCESS-DRIVEN
 To be effective, technology must align with the marketing process.
- CRM IS A FOUNDATION, NOT THE FINISH LINE CDPs, automation, and data lakes expand capabilities across channels.
- DATA LAKES UNLOCK PREDICTIVE POWER
 They enable AI, advanced analytics, and cross-channel insight extraction.

 4.THE VALUE IS NOT IN HAVING THE TOOLS, BUT IN HOW TOOLS ARE USED
 Optimization, training, and alignment matter more than tool count.