e-book

relevantedge

A MARKETER'S GUIDE TO COMPOSABLE ANALYTICS

The business case for unifying content, behavioral data, AI and BI

using Sitecore XMC and RelevantEdge

TABLE OF CONTENTS

INTRODUCTION

Conventional website analytics is ripe for reinvention.

By default, many organizations opt for conventional analytics (Google Analytics, is one example). But this is changing.

Data — especially behavioral customer data — has become more strategic for a variety of reasons.

As customer behavior becomes increasingly digital — fueled by AI — more organizations seek to leverage the business and strategic value of data.

Simply adding a tracking script on a website and seeing a line on a chart go up and down is no longer enough.

Now, composable analytics offers new possibilities to unlock business value using behavioral data.

With analytics composability, organizations gain a greater degree of data control — control of data quality, activation, security, cost, compliance and a better foundation to convert business strategy into measured results.

Considering these factors, this e-book aims to answer questions that include:

- What are alternatives to traditional analytics (e.g., Google Analytics)?
- Why do organizations opt for composable analytics?
- How can analytics composability unlock strategic business value?
- How does composability accelerate AI readiness and execution?
- What advantages have organizations gained?

WHO IS THIS E-BOOK FOR?

This e-book is primarily for marketers, web analysts, optimization specialists and product owners.

A key assumption is that you know little about composable analytics and you are not deeply technical.

It may be the case that you're researching alternatives to traditional analytics.

It may also be the case that you want to establish or enhance a data stack where you can adapt faster and avoid the technical and cost barriers from a monolith-based analytics and data-activation stack.

This e-book has a point of view, it's not agnostic. But we seek to explain core concepts and provide concrete explanations for how and why organizations use composable analytics.

Based on years of experience of building composable BI and data-activation solutions, as well as building solutions based on traditional analytics tools, we have learned about the benefits a more modular approach. This e-book is a way to share the learnings.

Purpose of this e-book

The purpose of this e-book is to educate marketers about how a modular analytics solution unlocks greater business value using an integrated core of behavioral data and content.

Chapter 1:
WHAT IS COMPOSABLE ANALYTICS?

Composable analytics takes a building-block approach to creating an analytics solution.

Modularity is a core concept. What in traditional analytics is one system with “welded” parts, is modular, exchangeable parts in a composable analytics solution.

For example, the web tracker in Google Analytics is not available as a standalone tracker that can plug into and adapt to other systems.

Composable analytics defined

Here’s a more detailed definition for composable analytics.

In a composable analytics architecture, data collection, data modeling, storage, processing, and reporting are each treated as independent building blocks that can be combined, replaced, or scaled as business needs evolve.

Use cases

Use cases for composable analytics include:

- B2B sites integrated with CRM
- Commerce sites integrated with customer and transaction data
- Portal that may contain personal information integrated with 3rd party systems
- Intranets that contain personal data
- Public-sector sites with requirements for privacy

Reuse what you already own

A composable analytics architecture gives you the ability to reuse and get more value from what you already own and pay for.

This could be hosting provider agreements, BI and reporting tools, content platforms and collaboration suites such as Microsoft 365.

Why composable?

Why do organizations adopt composable analytics?

The short answer is to gain a greater degree of business control using data.

This means control to make better decisions, cost control and ability to more readily reuse data for insights as well as business and conversion optimization.

Other adoption drivers are:

- Ensure data security
- Simplify compliance
- Control processing of customer data
- Reduce analytics cost of ownership
- Reuse systems already owned

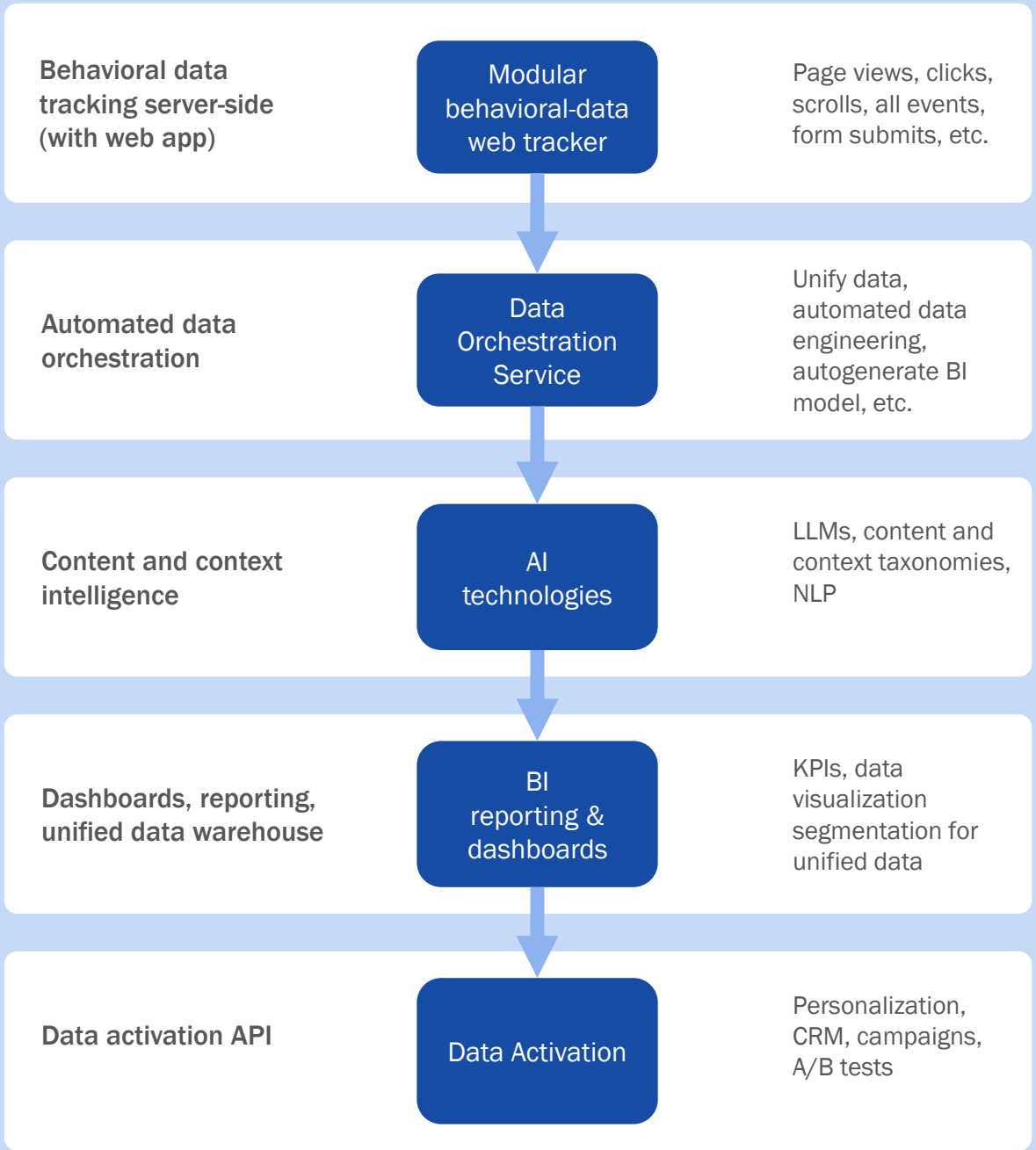
Flexibility via modularity

A modular, standalone web tracker provides the ability to readily adapt to custom requirements and gives flexibility for choosing the best fit for how data is unfed and visualized in BI.

Reduce costs via modular reuse

Avoiding and reducing consumption-based costs from popular monolith platforms — the cost of database queries, for example — is a key reason why organizations opt for composable analytics.

COMPOSABLE ANALYTICS BUILDING BLOCKS



Chapter 2:
THE ROLE OF BEHAVIORAL DATA

As users interact, they generate behavioral data. As web and app user experiences become more enriched, tracking behavioral nuances becomes more important.

What is behavioral data?

Click (or touch) events are an example of behavioral data. Depending on the user experience, the user may be navigating to a page, advancing a carousel, opening a tab, clicking within a specific content component, opening an external site, and so on.

Tracking granular behavior is the key to detecting and measuring user intent,

Shape data usability

Collecting data at its origin — via the web tracker — is an ideal opportunity to shape data quality and usability..

Web tracker for composable

A modular web tracker used in composable analytics is arguably the most important building block.

Important functionality for a modular web tracker includes:

Server-side – events tracked in the user's device (client-side) should be transferred to storage via a server-side connection. This avoids data blocking and collecting more data.

Encrypted cookies – ensures better privacy and security for users.

Option for cookieless – to track basic session data while adhering to consent and privacy regulations.

Extensible – to enrich events with custom data

Automation – to categorize tracked data for intuitive dashboarding.

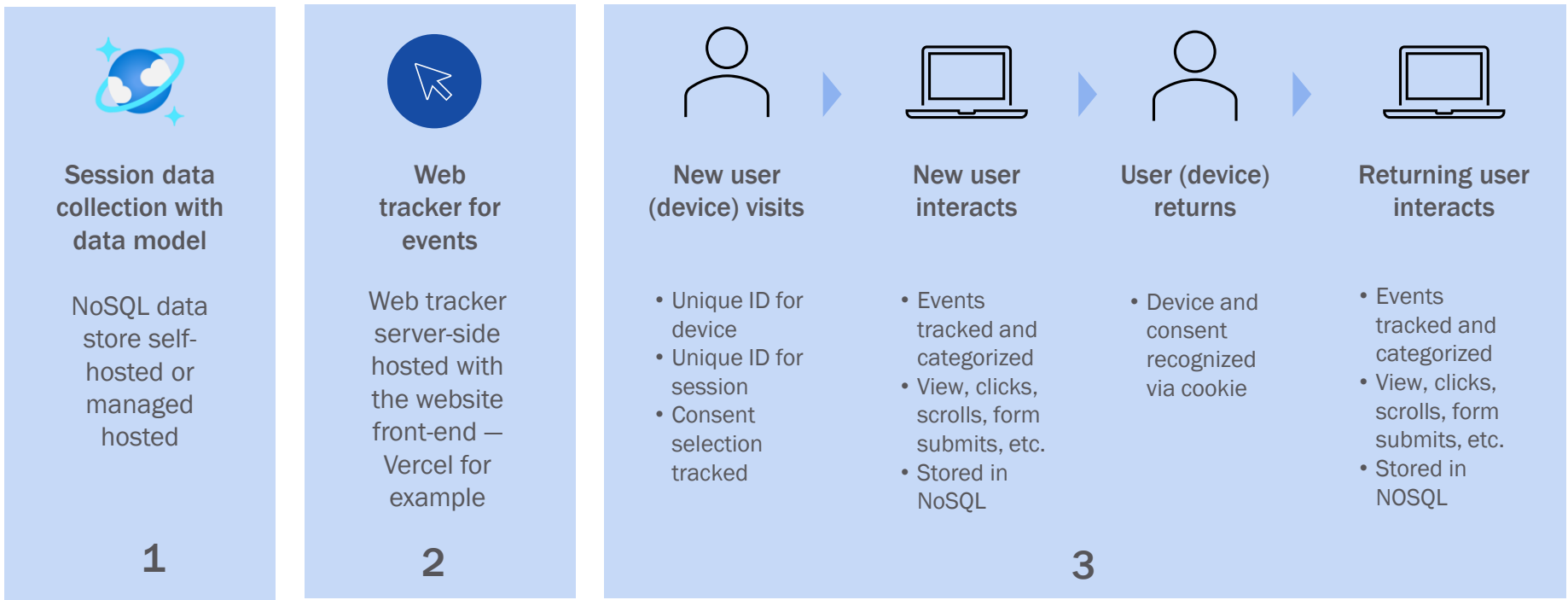
Evaluating a web tracker

Unlike traditional analytics, a modular web tracker can be used for a composable analytics solution to collect behavioral data.

A modular tracker should include:

- Predefined events that are comprehensive and ready to use out of the box
- Implementation architecture
- Data schema that is comprehensive and extensible
- Options for data destinations

How a modular behavioral web tracker works



1. **Read-to-use data schema.** Based on a pre-designed data schema, session data is collected in, for example, a NoSQL data repository such as Cosmos DB or Raven DB.

   Collected data is further processed and transformed using a data orchestration service.

2. **Server-side tracker.** Tail.js is an example of a modular web tracker built for composable analytics. Tail.js is designed to be deployed as a server-side tracker with client-side event collection.

   Tail.js is deployed as a package in for example Vercel — the same host as the web app for the website frontend.

3. **Pre-defined tracking model.** The tracker collects pre-dined events (such as views by view type, clicks by click types and form events).

   Automation categorizes events types. For example, with Tail.js, there are seven types of clicks (navigational, in-component, external, exit, etc.)

The event model for a modular web tracker

Extensible, pre-built event model

While some web trackers start with a blank slate, some start with a pre-built event model.

As shown, the RelevantEdge tracker based on tail.js defines granular events — especially for clicks and forms.

The RelevantEdge tracker, by design, integrates with the content management system (CMS) for the site being tracked.

With this, tracked data is enriched based on content and content architecture.

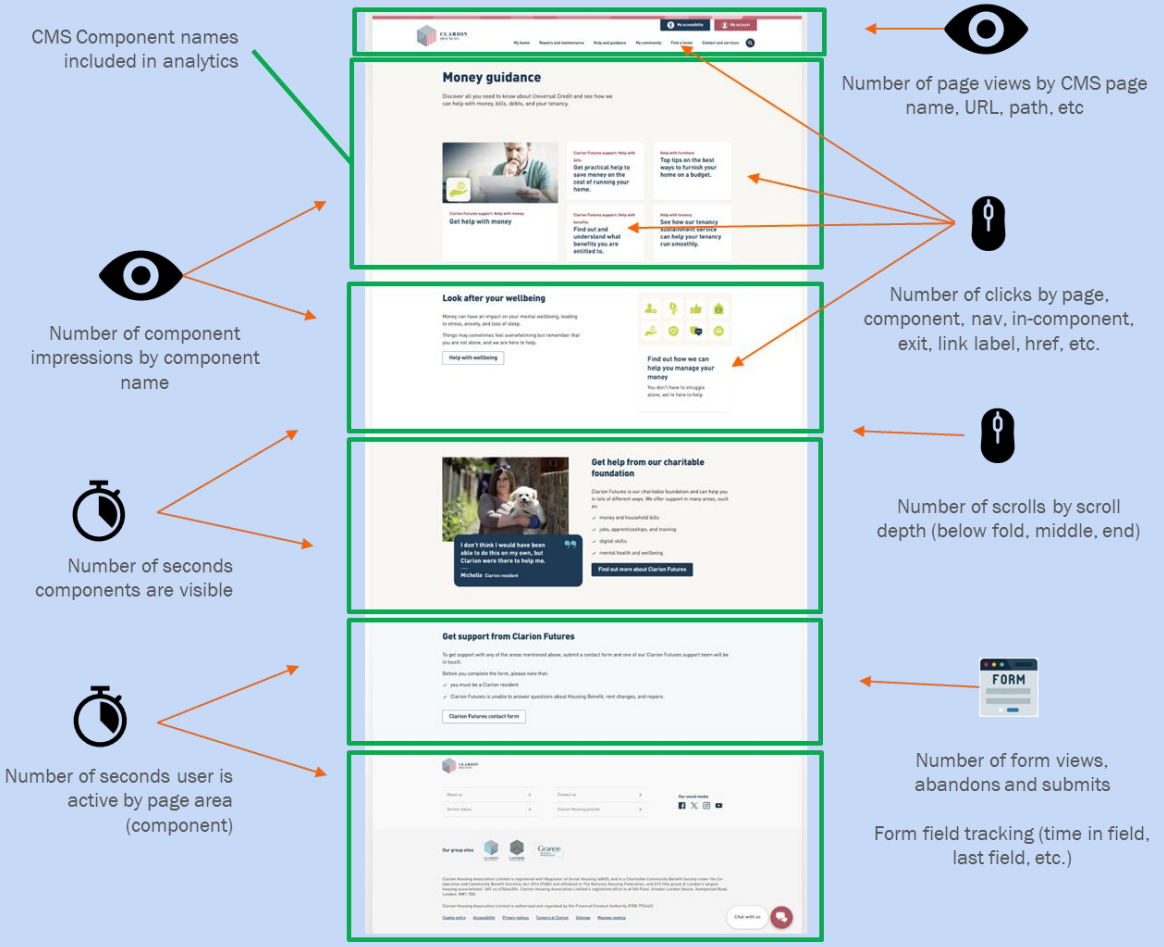
Enriching behavioral data

Behavioral data is first generated as the user, for example, clicks a link or button. The data is then stored and then enriched via transformation. Transformation creates metrics from flat interaction data.

Tracking nuanced behavior

As shown to the right, a tracker can record nuanced behavior. For example, if the user is actively viewing a page or passively viewing a page.

A behavior such as actively viewing a page can be combined with where on the page —by component names — did the user actively view the page by the number of seconds active.



Granular behavioral data. Tail.js is an example of a modular web tracker built for composable analytics.

RelevantEdge has adapted tail.js to give insights by content component, as shown above.

Chapter 3:
WHY INTEGRATE CONTENT WITH ANALYTICS?

Some say content is context. It can be if you can track content at a more atomic, granular level,

But traditional analytics does not do this. Conventional, out-of-the-box analytics tracks only page-level identifiers and not the actual content on a web page.

Track atomic page content

A key benefit of composable analytics is the ability to track atomic page content.

This includes tracking based on:

- Content components
- CMS-based content taxonomies
- AI-generated textual content taxonomies
- AI-generated UX and design taxonomies
- Page-level fields in CMS
- Page rendering payloads that contain identifiers and content for page elements.

Use content as a data source

In a composable analytics solution, you can treat the CMS content platform you use as a data source.

You can integrate to CMS and programmatically read the content architecture and building blocks such as sites, templates, and page fields.

Benefits include:

- Resue CMS elements such as page names in BI dashboards
- Organize and present insights based on content architecture in CMS
- Present more meaningful insights by relating atomic content to engagement and conversion metrics
- Identify segments — based on atomic content — more accurately in BI and make segments available to data activation

Better ROI on content

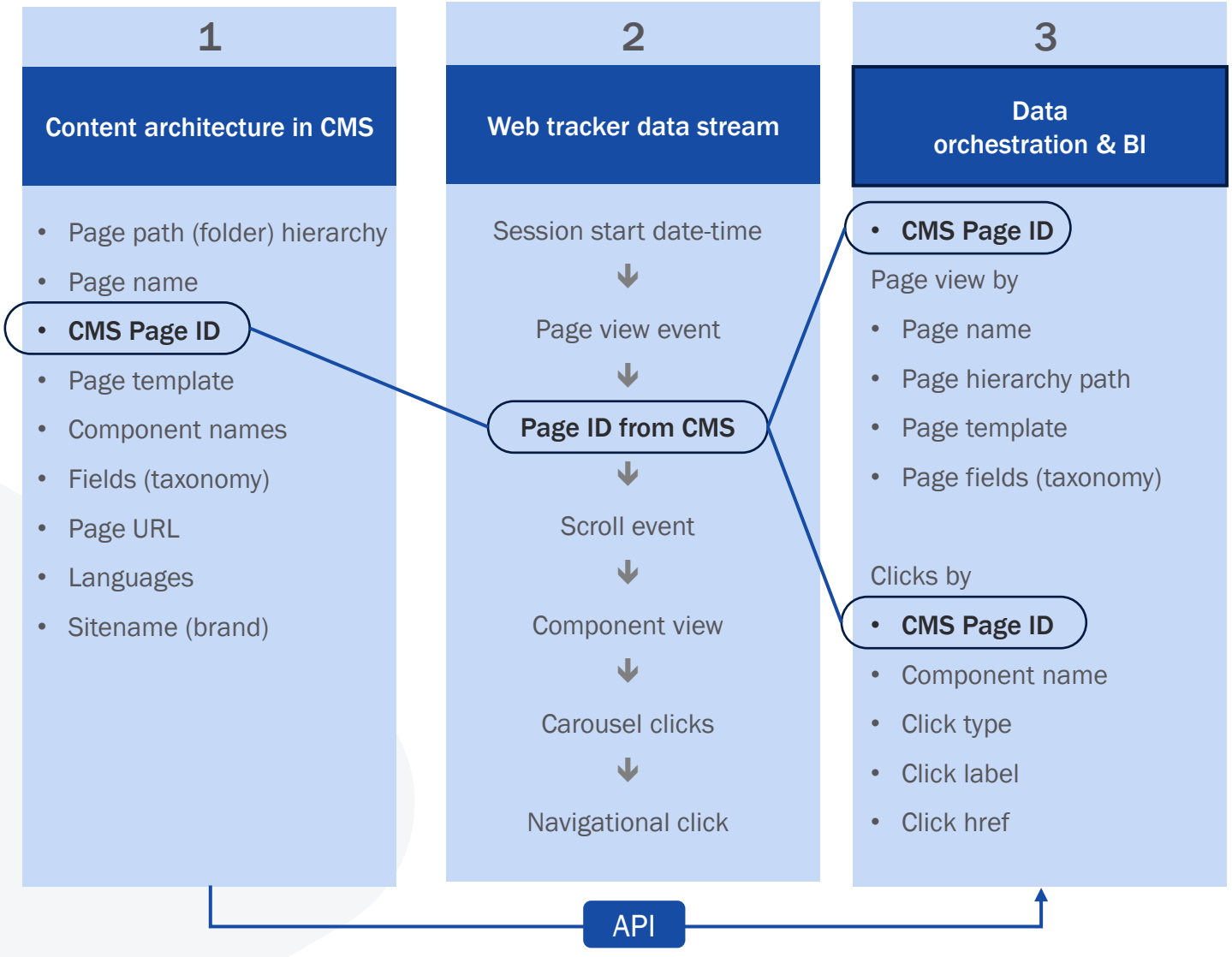
Using a composable approach you can establish dashboard KPIs for measuring how atomic page content contributes to engagement and conversions.

Instead of using only page-level metrics, you can use, for example, topics that span pages.

With this, your KPIs can more accurately reflect how your content strategy helps drive metrics for engagement and conversions — filtered by channel and audience

The content capabilities described in this e-book can be used with Sitecore XMC, XP and CDP as well as any CMS.

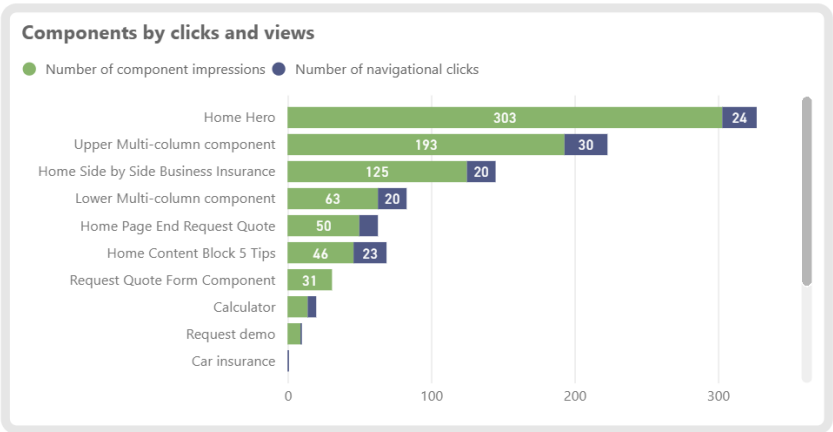
How tracked data is joined with content in CMS

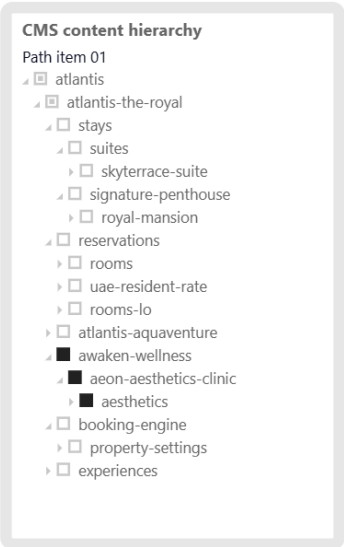


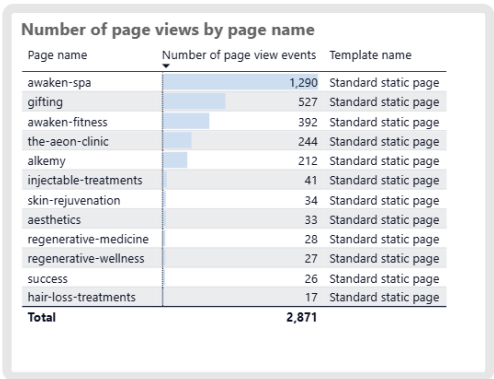
Here is an example of how a composable web tracker (RelevantEdge Tail.js) joins CMS content attributes with behavioral data to provide BI metrics.

1. The CMS page IDs are rendered as part of the page payload
2. The tracker reads page IDs when pages are rendered
3. The data orchestration service (for example, RelevantEdge) uses and API connection to the CMS to read page attributes. The attributes are used in BI metrics

Content insights in BI using CMS components and architecture







Number of page views by page name

Page name	Number of page view events	Template name
awaken-spa	1,290	Standard static page
gifting	527	Standard static page
awaken-fitness	392	Standard static page
the-aeon-clinic	244	Standard static page
alkemy	212	Standard static page
injectable-treatments	41	Standard static page
skin-rejuvenation	34	Standard static page
aesthetics	33	Standard static page
regenerative-medicine	28	Standard static page
regenerative-wellness	27	Standard static page
success	26	Standard static page
hair-loss-treatments	17	Standard static page
Total	**2,871**	

Insights based on content components
Web pages are created using content components. Users interact with content components.

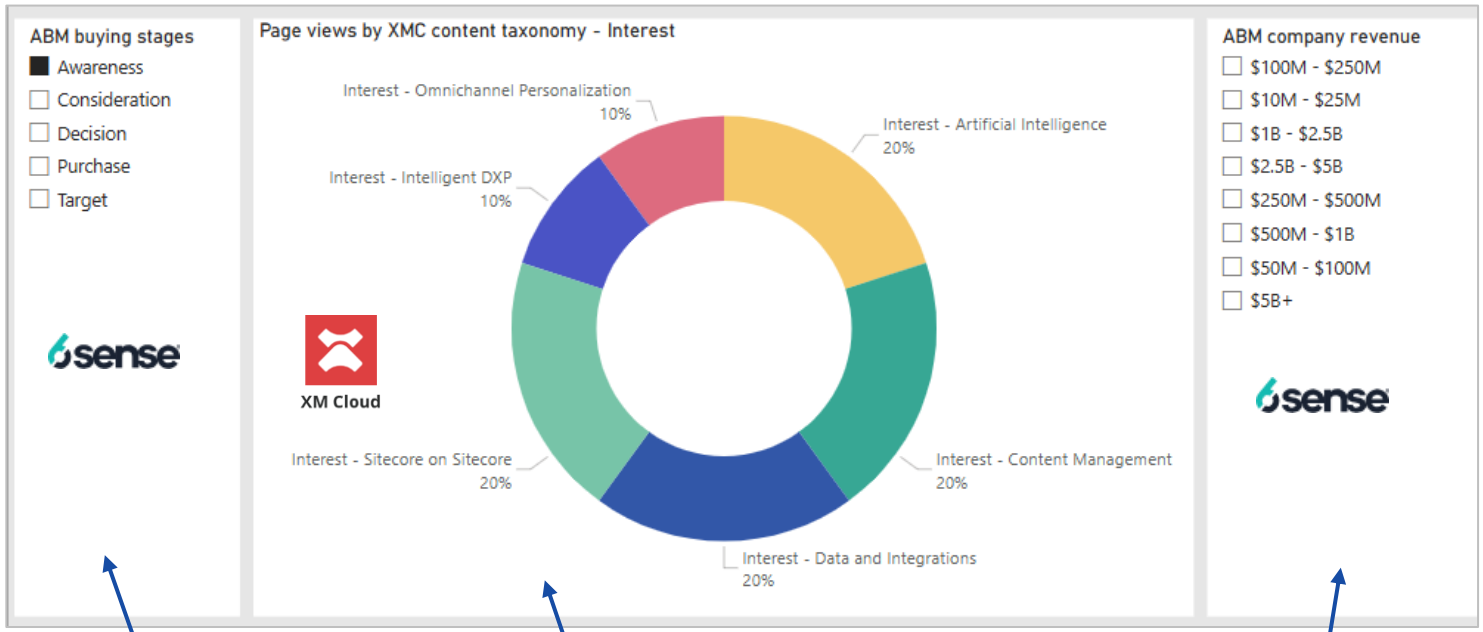
With a composable approach, it's possible to track individual, named components. Above shows how tracking of impressions (views) of individual components as well as click-throughs enables marketers to measure engagement and conversion rates by content components. . .

Insights based on CMS content architecture
Websites are based on carefully thought-out content hierarchies.

Why not reuse content architecture when organizing dashboards and filtering insights and metrics?

Above shows how page views are filtered by the CMS content tree and CMS templates used to build pages.

Content insights in BI based on session data, CMS taxonomies and ABM



ABM data filters

Number of page views by CMS taxonomy name

Account Based Marketing (ABM) data filters

Content taxonomies created in CMS
In CMS, marketers assign taxonomy tags to web pages to provide meta data for page content.

Segmentation using taxonomy and ABM
The chart above shows filtered segmentation insights by taxonomy tag values. In this example, the taxonomy tags show product capability interest.

Chapter 4:
AI AND COMPOSABLE ANALYTICS

A composable analytics approach gives you the ability to keep pace with AI innovations, show tangible results, and avoid getting locked into AI tools and architectures.

But first, just why should you use AI as a building block in a composable analytics architecture?

Optimize for LLMs as an audience

LLMs are an intermediary essentially reading your content and speaking for your business domain, brand and organization. And AI assistants drive traffic to your site.

Content readiness and optimization for LLMs is an example of a capability you can use in a composable architecture.

You can incorporate modular AI functionality to measure how well-structured and effective your content is for LLMs as an audience.

Establish metrics for context

Another capability you can implement is measuring the engagement and conversions based on the context of digital experiences.

To do so, LLM technology can be used to generate multi-dimensional taxonomies for web sites.

> Taxonomies provide a more granular, contextual view of your website content, UX and customer experience.

In a composable analytics set up, you can connect these taxonomies to behavioral metrics.

With this, you understand and measure the context in which users engage and convert.

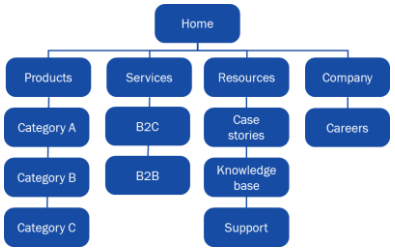
Why AI in composable analytics?

In a composable analytics architecture, AI acts as a modular intelligence layer that enriches behavioral data with meaning, automates interpretation, and feeds reusable insights into BI and decision systems — without locking organizations into a single analytics or AI stack.

How to use AI in composable analytics to measure user context

1

Website pages



2

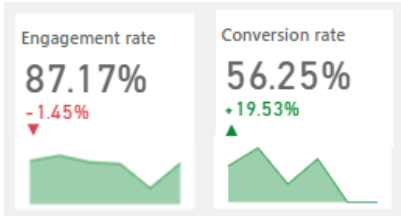
AI-powered taxonomy generator app

3

Generated taxonomies

4

Taxonomy values joined in BI with behavioral data



1. **Website pages.** Website pages in an information hierarchy to support business objectives.
2. **Taxonomy generator.** Reads and captures full web pages. Generates taxonomies for topics, content types, audiences, semantic style, UX and design.
3. **Stored taxonomies.** Taxonomies stored in a data base..
4. **Taxonomy metrics.** Taxonomy values joined with behavioral metrics..
5. **Import to CMS pages**. Optionally taxonomy values can be added to CMS for each respective page.

How to measure engagement using an AI-generated content taxonomy

An LLM-powered content taxonomy generator is an example of a modular AI service that you can use in a composable analytics solution.

How a taxonomy generator works

A taxonomy generator scans hundreds or thousands of web pages, analyzes content, UX and design and outputs different taxonomies. You can then connect taxonomies to analytics.

Examples of taxonomies include:

Topics – identify weighted topics across pages

Audiences – identify for whom categories and pages are intended

User intents – what user intents are facilitated across pages

UX – how accessible is the user experience across pages

Topics taxonomy

Topic pillar

Topics Level 1

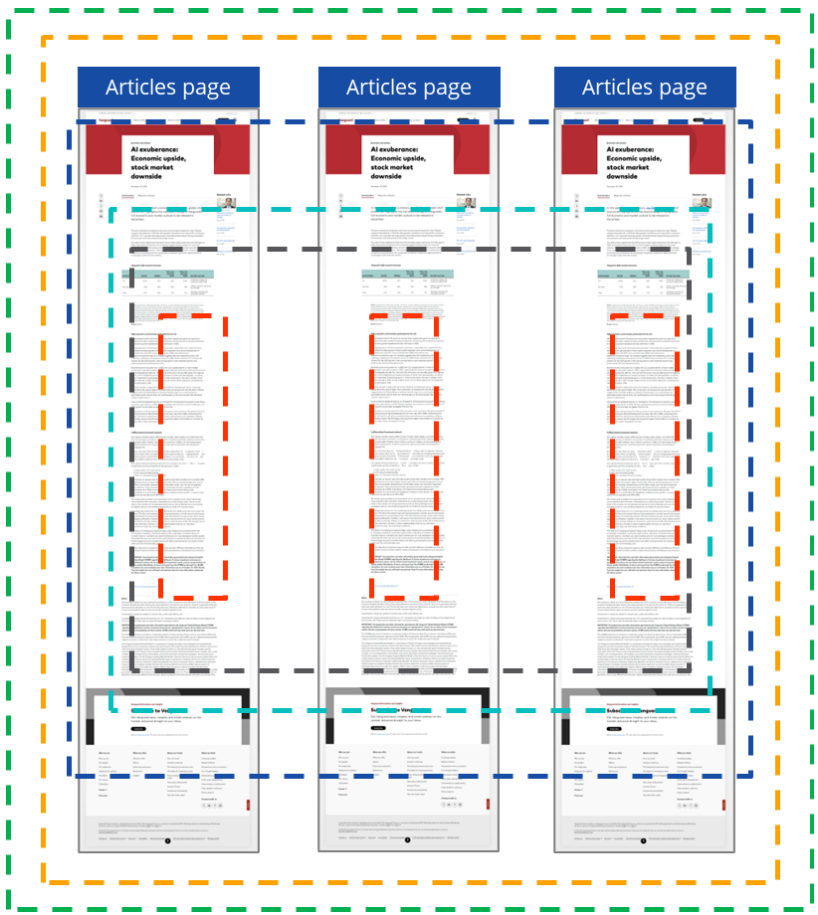
Topics Level 2

Topics Level 3

Topics Level 4

Topics Level 5

A topics taxonomy identifies a hierarchy of topics across pages. The granular topics values are connected to behavioral analytics. The resulting engagement metrics give marketers deeper insights for user context.



Insights based on a multi-dimensional taxonomy for your website

As an example of an AI capability that you can plug into a composable analytics solution, a taxonomy generator serves several purposes.

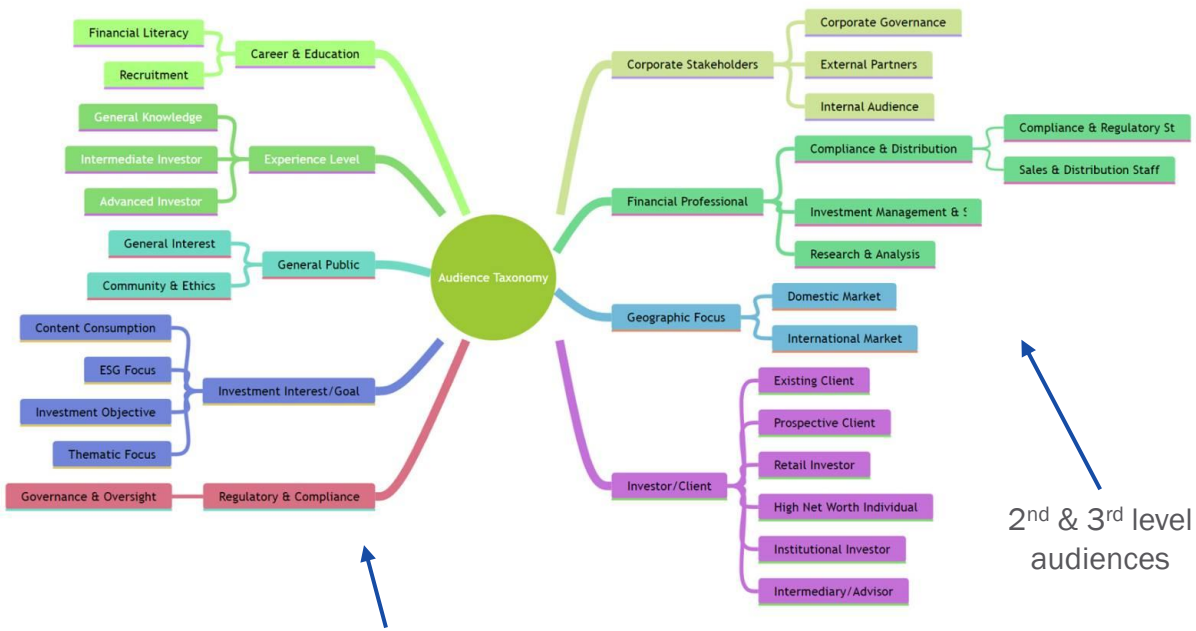
Foremost, you get a better understand how LLMs interpret your website content.

How do LLMs see your audiences

For example, you can generate a taxonomy for audiences. That is, you have LLMs identify a hierarchy of audiences — from general to specific — based on website content.

You may find that you want to adjust content so that audiences are more clearly identifiable by LLMs.

You can connect the audience taxonomy to web tracking data and measure engagements and conversions by audiences.



Audience taxonomy
While not detailed in these examples, organizations use composable to reduce the cost of data queries, storage and SaaS subscription costs.

Chapter 5:
EXAMPLES BASED ON CASES

This chapter highlights examples of organizations that use composable analytics solutions.

While the identities of the organizations are anonymous, you learn why and how these organizations use composable set ups.

Cost control
While not detailed in these examples, organizations use composable to reduce the cost of data queries, storage and SaaS subscription costs.

Deeper insights, secure data

Some of the themes and capabilities these composable solutions have in common are:

- Strategic KPIs based on revenue, cost and customer behavioral data from multiple data sources
- Unique, custom Insights based on unified data
- Customer journey insights that can be segmented beyond what is typically possible
- Conversion insights that can be filtered using sensitive data that cannot be used outside the organization's environment

Examples in this chapter

B2C commerce
Multi-brand global luxury resorts organization

B2B demand generation
Leading finance organization

B2B commerce portal
Leading agriculture supplies organization

B2B lead generation
Global SaaS marketing technology organization

B2C commerce
Global automotive industry organization

Example of a composable analytics solution for B2C commerce

Multi-brand global luxury resorts organization

In this example a multi-brand, global luxury resorts organization uses a composable analytics solution to gain a variety of custom insights to support decision making.

The multi-site solution enables customers to book stays at luxury resorts globally.

Why composable analytics?

Rolled-up reporting for revenue, bookings, audiences across brands, resorts

Custom KPIs to support advertising, content marketing and personalization

Reduce labor costs of conventional tag manager via DXP tracking for multi-site, multi-brand

End-to-end data security via DXP architecture and unified data warehouse in self-hosted Azure SQL

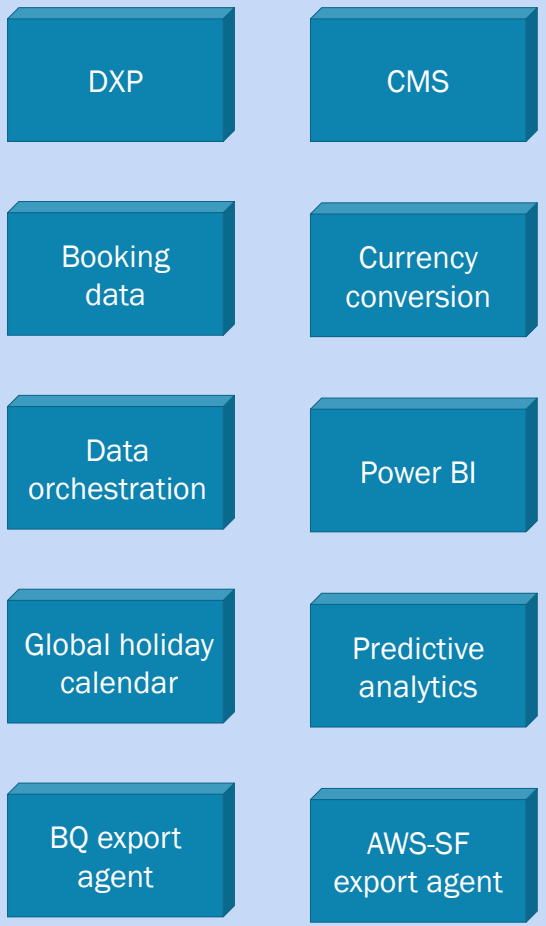
Jan 202

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 1.01%	2 0.99%	3 1.03%
4 1.26%	5 1.48%	6 1.86%	7 1.96%	8 1.90%	9 2.07%	10 1.72%
11 1.58%	12 1.47%	13 1.33%	14 1.58%	15 1.81%	16 1.88%	17 1.81%
18 1.32%	19 1.26%	20 1.12%	21 1.08%	22 1.06%	23 1.14%	24 1.75%
25 1.80%	26 1.65%	27 1.72%	28 1.74%	29 2.13%	30 2.57%	31 2.60%

Data visualization example

This example shows look-to-book conversion rates by resort property for upcoming months. Marketers use this to understand what dates are in demand to improve advertising and on-site audience targeting.

Composable building blocks



Example of a composable analytics solution for demand generation

Leading finance organization

In this example, a leading fund management organization uses a composable analytics solution to generate demand and conversions.

Using the website, potential and existing investors explore original research content in formats such as articles, videos and podcasts as well establish fund accounts.

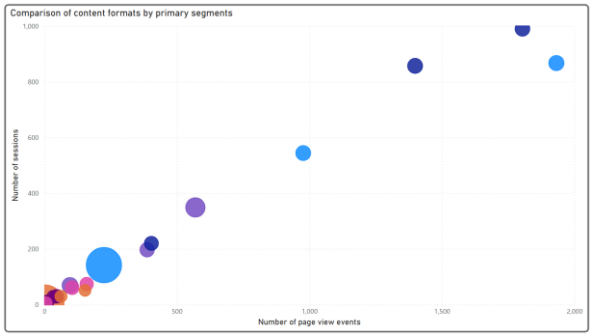
Why composable analytics?

Use KPIs to track engagement and conversions filtered by audience

Gain intelligence about trending topics published on the site, and make decisions about future topics to publish

Understand customer journey — via channels — for the main audiences for the site

Measure personalization to assess effectiveness on conversions



Data visualization example

This example conceptually shows a comparison of engagement of content types by the main audiences of the site. Audience definitions are determined via integrated CRM data.

Composable building blocks

- CMS
- RelevantEdge Web tracker
- Data orchestration
- Power BI
- AI taxonomy generator
- CRM
- Personalization
- Consent Manager

Example of a composable analytics solution for B2B commerce

Leading agriculture supplies organization

In this example, Europe's largest ag supplies organization uses a composable analytics solution to gain custom insights with its B2B sales portal.

Using the solution, farmers order supplies using an App and web portals.

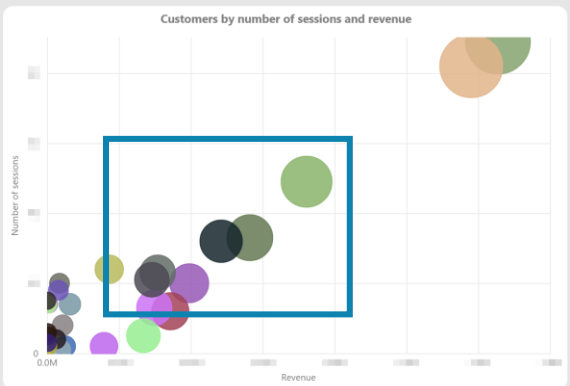
Why composable analytics?

Optimize account sales using rolled up and drill down insights that combine marketing channels, web and ERP data

Measure self-service overall and by key accounts to decide on further self-service investments

Increase accuracy of website and app insights by migrating from aggregated analytics to user-session analytics

Support sellers with web data in CRM

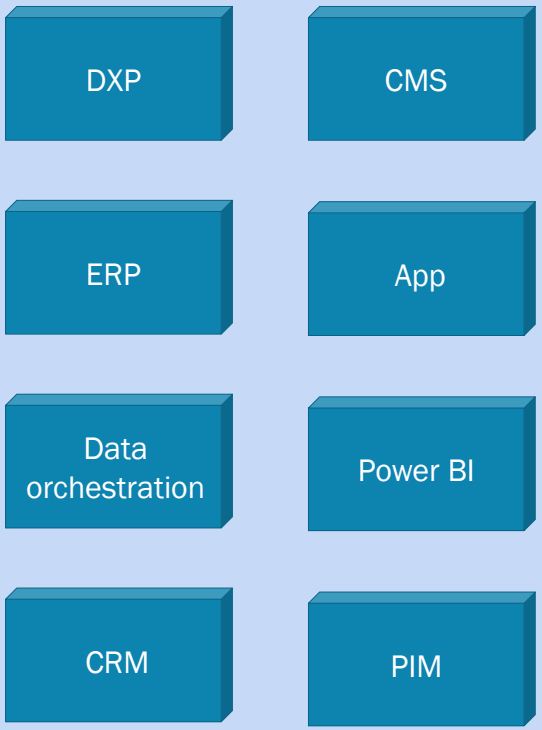


Data visualization example

This example shows accounts by sessions and revenue. The chart is filtered by a product group attribute from CRM.

Sellers use this chart to understand what accounts to contact based on how active the accounts are what the revue levels are currently.

Composable building blocks



Example of a composable analytics solution for B2B lead generation

Global SaaS marketing technology organization

In this example a global technology organization uses a composable analytics solution to help optimize conversions using website content, advertising and personalization.

The multi-language site generates demand and leads with a focus on informative, targeted content.

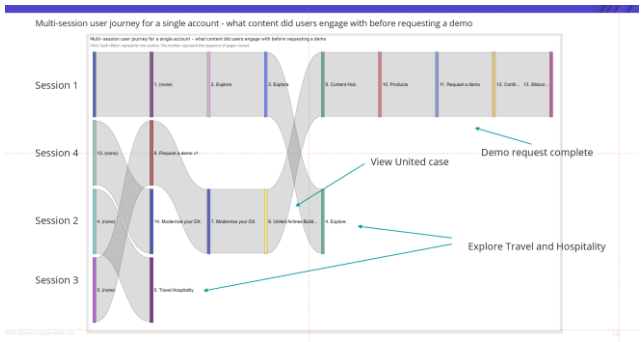
Why composable analytics?

Decide on content investments, based engagement and conversions

Understand potential customer behavior using ABM data integrated with session data

Attribute personalization effects before and after exposure to personalization

Provide sales intelligence based unified content engagement data unified with CRM and ABM data



Data visualization example

This example shows the customer journey for a site visitor who completed the site's top conversion.

The journey shows how the visitor read case stories related to a vertical industry before completing the conversion.

Composable building blocks

- DXP
- CMS
- CDP
- Personalization
- Data orchestration
- Power BI
- Account-based Marketing
- CRM
- Campaign attribution
- Predictive analytics

Example of a composable analytics solution for B2C commerce

Global automotive industry organization

In this example, the world's largest producer of tires uses a composable analytics solution to manage demand and bookings via its B2C portal.

Using the solution, customers can research motor vehicle tires and services and book service appointments at service centers.

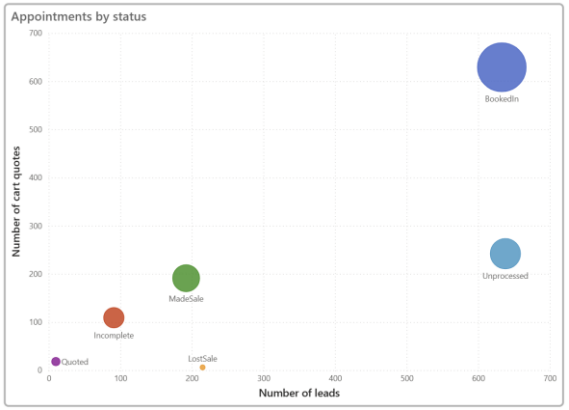
Why composable analytics?

Provide operational reporting for web-order processing of service and sales appointments

Attribute sales by channel and spend

Manage store information (opening hours, location, phone, etc.) used in channels such as Google maps

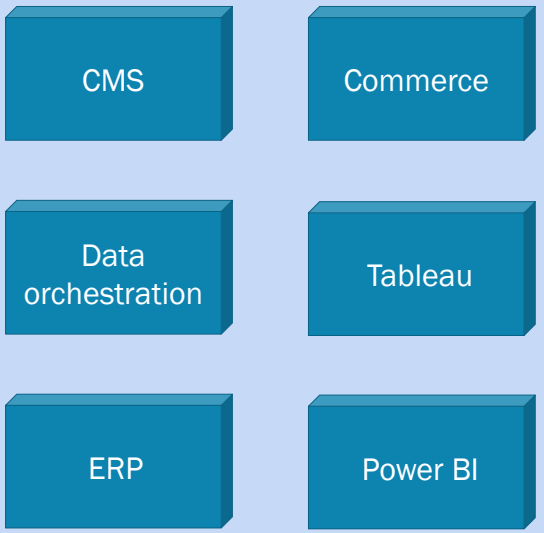
Provide data warehouse data format for consolidated reporting in Tableau (migrating to Power BI)



Data visualization example

This example uses unified data from web, commerce and ERP. The charts shows all automotive requests for service by the current state of service processing and fulfillment.

Composable building blocks



About RelevantEdge

Composable solutions

RelevantEdge provides composable BI analytics solutions using the RelevantEdge data orchestration service.

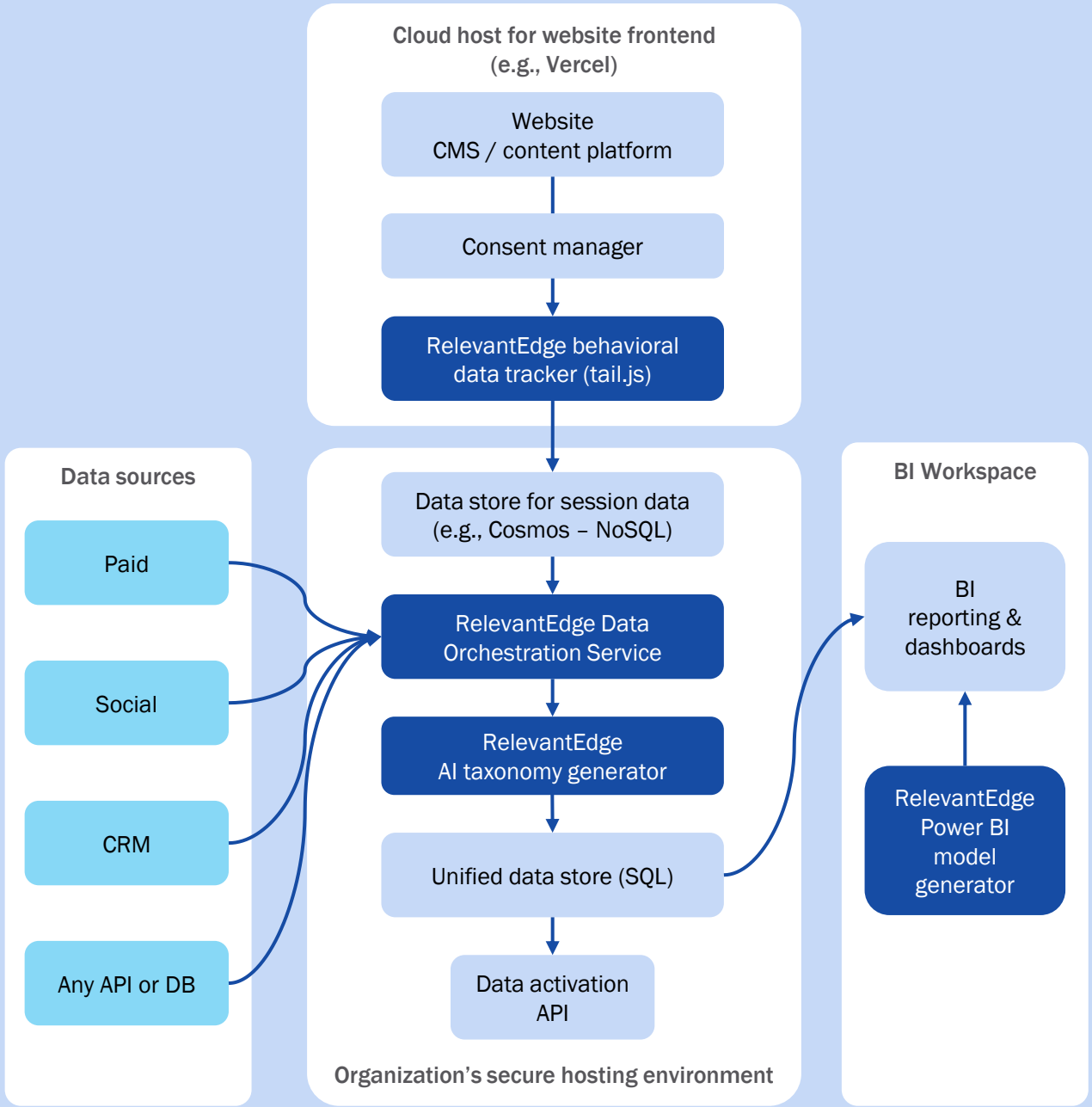
Data security-first solutions

With a focus on unifying CMS-based content with data sources such as CRM, commerce, and the RelevantEdge web tracker, RelevantEdge serves customers globally.

relevantedge

relevant-edge.com

RelevantEdge
COMPOSABLE ANALYTICS SOLUTION



RelevantEdge ApS

relevant-edge.com