

A series of light blue circuit lines with circular nodes, extending from the left edge of the slide towards the central text box.

BMBM5023

**DIGITAL INTELLIGENCE AND
FUTURE DEVELOPMENT**

A yellow-outlined crest or shield featuring a diagonal band. The upper left contains three blue flowers, and the lower right contains a yellow oak leaf. The crest is positioned on the right side of the slide, partially overlapping the central text box.

**AN OVERVIEW OF BUSINESS
INTELLIGENCE & ANALYTICS**



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ABOUT YOU

Each tell me 2 things you achieved this summer, and 1 thing you wish you had achieved!



THE BUSINESS ENVIRONMENT



ACTIVITY

What **FACTORS** might impact on a Businesses Environment?



OTHER FACTORS

- Markets
- Company Finances
- Consumer Demand
- Technology
- Antecedent influences
- Chance
- Available resources



2455

THE BUSINESS ENVIRONMENT

- Depending on the type of organization and the markets they operate in it may be beneficial to be agile and to make frequent and quick strategic, tactical, and operational decisions, some of which are very complex. Some industries are like a river with stable demand and little need for quick adjustments.

What types of businesses are less sensitive to external factors? Why?



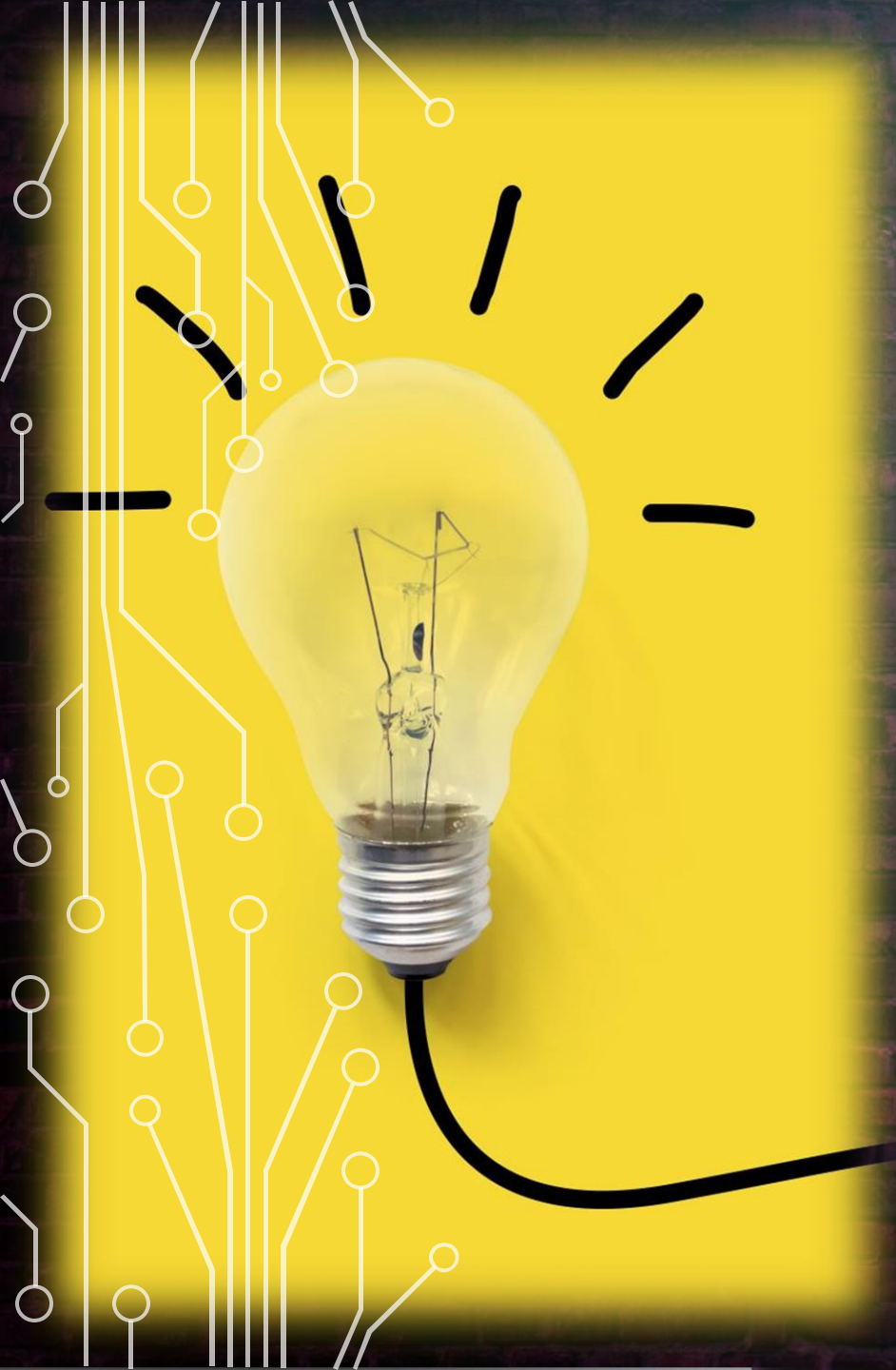
What types of businesses are most sensitive to external factors?



- Decision making in less stable markets may require considerable amounts of relevant data, information, and knowledge. Processing these, in the framework of the needed decisions, must be done quickly, frequently in real time, and usually requires some computerised support.

ACTIVITY

How would you as
strategic
managers in the
industries you
work for, respond
to these factors?



RESPONSE

- Managers may take actions, such as.....
 - Employ strategic planning.
 - Use new and innovative business models.
 - Reframing narratives and perspectives
 - Restructure business processes.
 - Participate in M/A/SA.
 - Improve corporate information systems

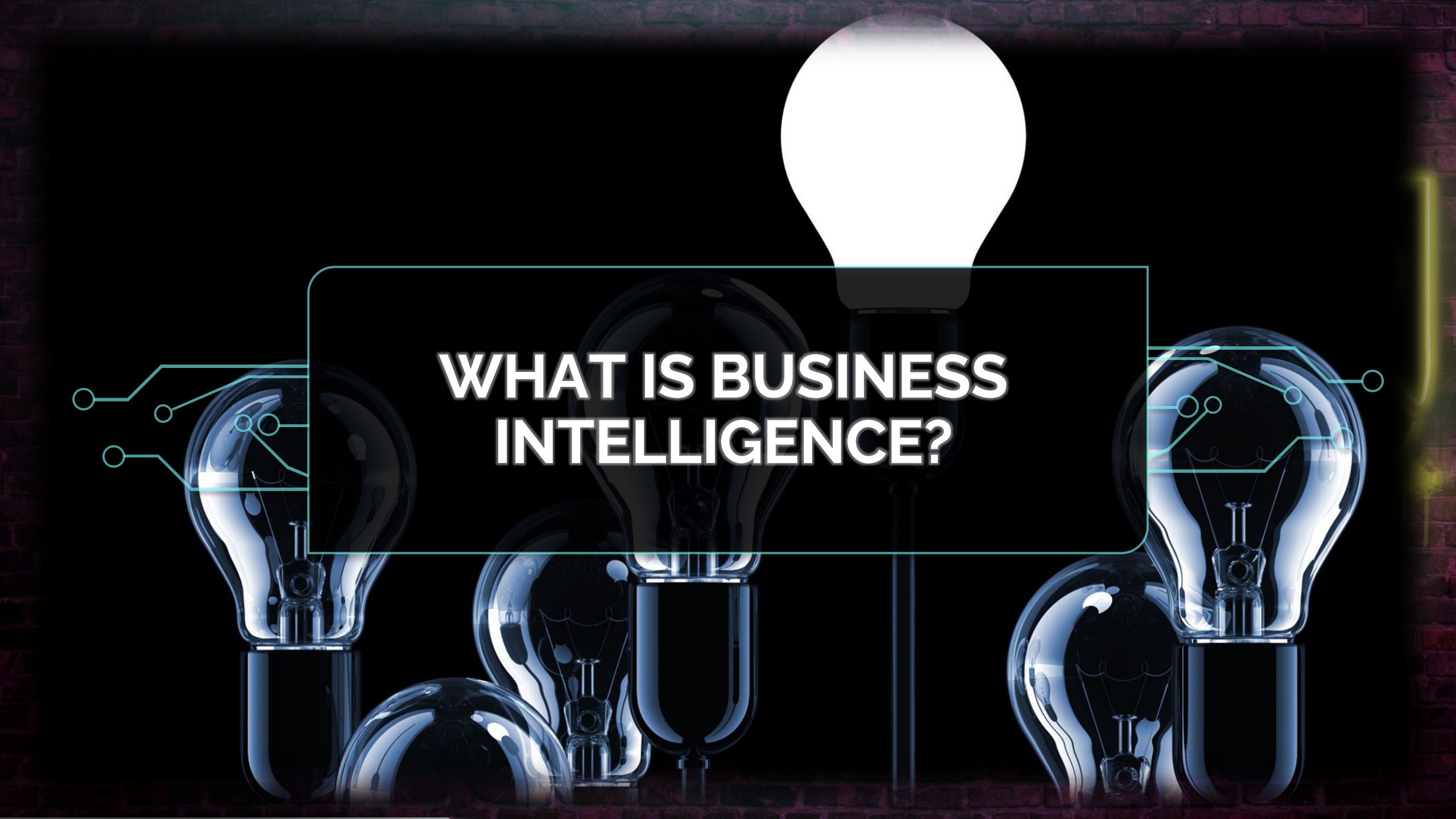
CLOSING THE STRATEGY GAP

- One of the major objectives of computerised decision support is to facilitate closing the gap between the current performance of an organisation and its desired performance, as expressed in its mission, objectives, and goals, and the strategy to achieve them.



ENTER...

BUSINESS INTELLIGENCE (BI)



WHAT IS BUSINESS INTELLIGENCE?

A FRAMEWORK FOR BUSINESS INTELLIGENCE (BI)

- BI is an evolution of decision support concepts over time

Then: Executive Information System

Now: Everybody's Information System (BI)

- BI systems can be enhanced with additional visualisations, alerts, and performance measurement capabilities
- The term BI emerged from industry



BUSINESS INTELLIGENCE (BI)

**WHAT IS
BUSINESS
INTELLIGENCE?**

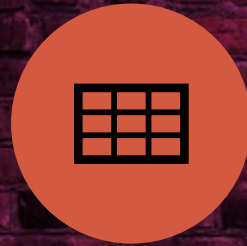
BERNARD MARR



WHAT IS BUSINESS INTELLIGENCE (BI) ?



BI is an umbrella term that combines architectures, tools, databases, analytical tools, applications, and methodologies.



BI is Interactive access, so it means different things to different people depending on how it is used.



BI's major objective *is to enable easy access to data (and models) to provide business managers with the ability to conduct analysis.*

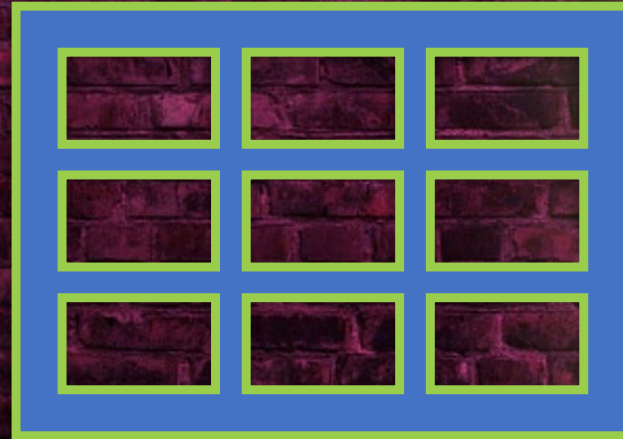


BI helps *transform* data, to information (and knowledge), to decisions, and finally to action

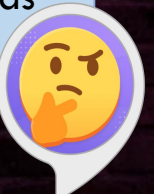


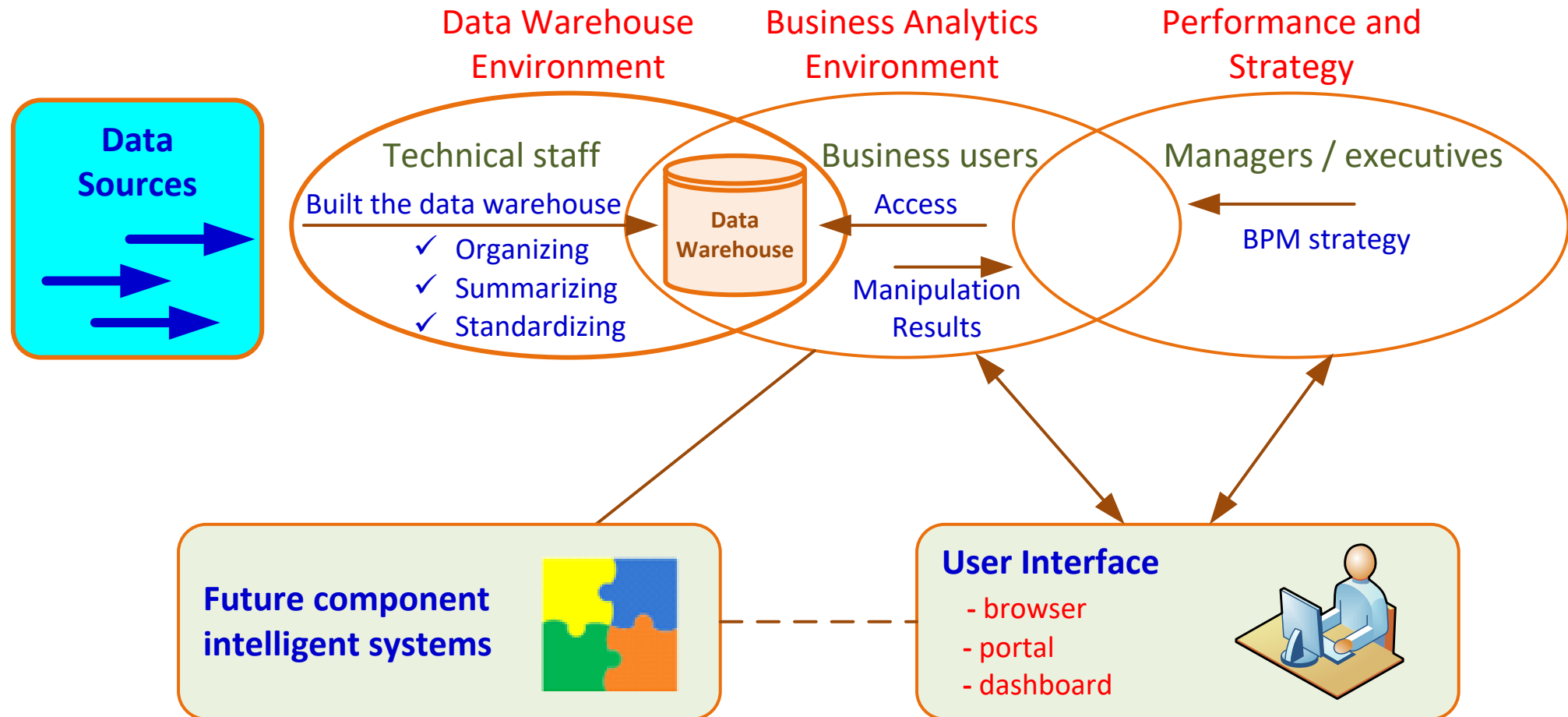
MAJOR COMPONENTS OF BI

- BI systems have four major components:
- The data warehouse (Centralised repository of source data), although this is changing with blockchain, decentralized information nodes and linked databases.
- Business Analytics (a collection of tools for manipulating, mining, and analysing the data in the data warehouse),
- Business Performance Management (for monitoring and analysing performance), and the
- User Interface (e.g., a dashboard).



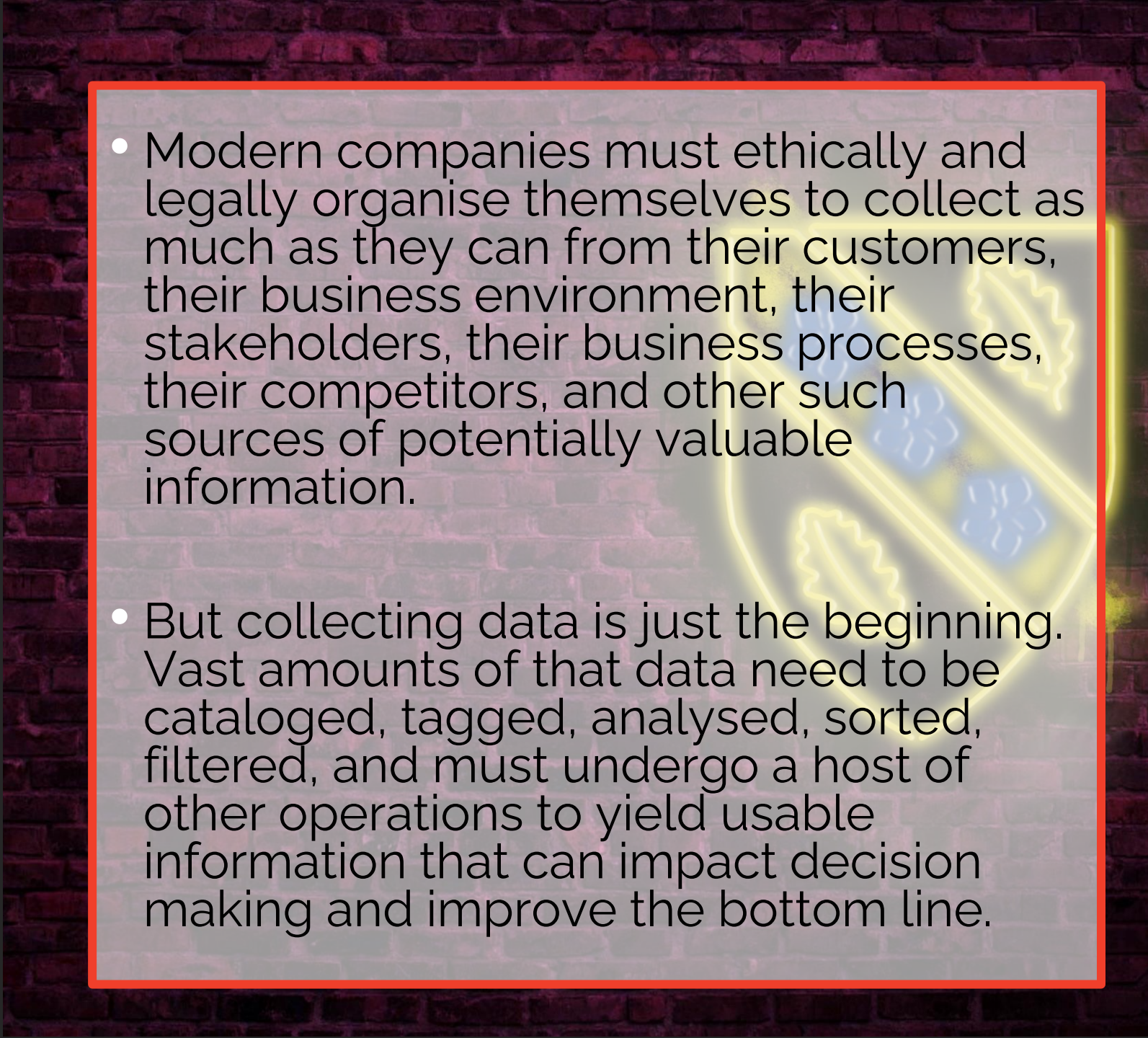
Why are companies making a move away from data warehouses towards linked databases and nodes?





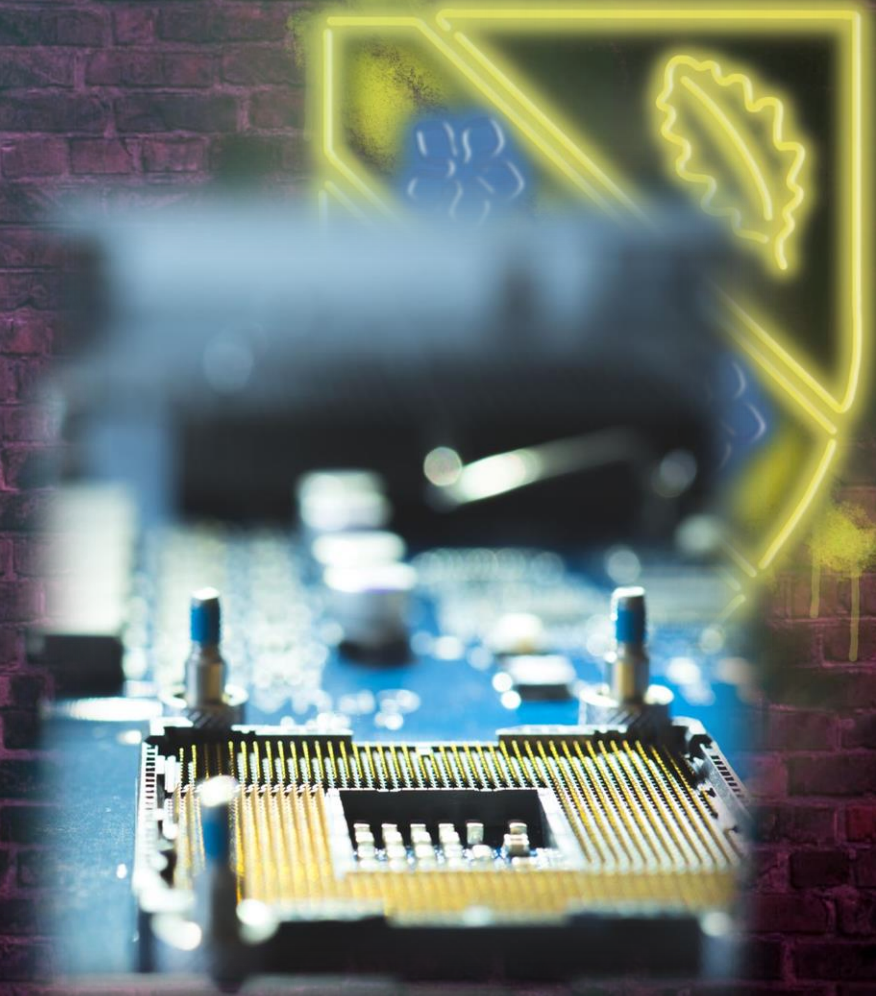


WHAT IS INTELLIGENCE GATHERING?

- 
- Modern companies must ethically and legally organise themselves to collect as much as they can from their customers, their business environment, their stakeholders, their business processes, their competitors, and other such sources of potentially valuable information.
 - But collecting data is just the beginning. Vast amounts of that data need to be cataloged, tagged, analysed, sorted, filtered, and must undergo a host of other operations to yield usable information that can impact decision making and improve the bottom line.

ONLINE TRANSACTION PROCESSING (OLTP)

OLTP is a type of computer processing where the computer responds immediately to user requests. Each request is a *transaction*, which is a computerised record of a discrete event, such as the receipt of inventory or a customer order. Or a withdrawal from an ATM machine. Or scanning of your groceries.



ONLINE ANALYTICAL PROCESSING (OLAP)

OLAP is computer processing that enables a user to easily and selectively extract and view data from different points of view.

For example, a user can request that data be analysed to display a spreadsheet showing all of a company's beach ball products sold in Florida in the month of July.



You likely use a form of this most days,
give me an example

Ground News



TYPES OF BI USERS

BI may have a larger and more diversified user community. One of the most important aspects of a successful BI is that it must be of benefit to the enterprise. This implies that there are likely to be a host of users in the organisation, many of whom should be involved from the outset of an investment decision. Not surprisingly, there are likely to be users who focus at the strategic level and those who are more oriented to the operational level.



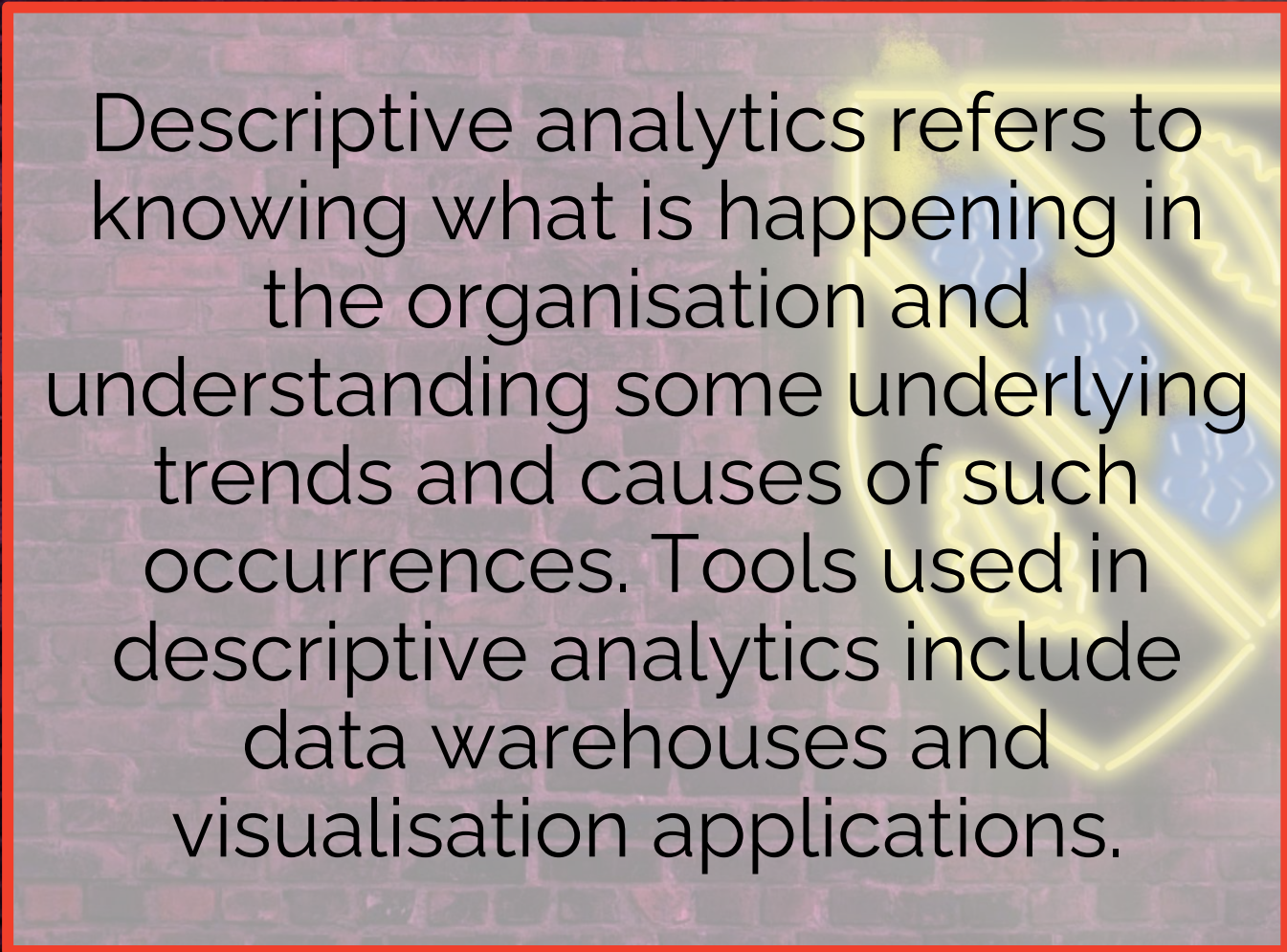
WHAT IS ANALYTICS?

Analytics... Is the process of developing actionable decisions or recommendations for actions based upon insights generated from historical data.



A decorative graphic on the left side of the slide consisting of blue lines and circles, resembling a circuit or data flow diagram.

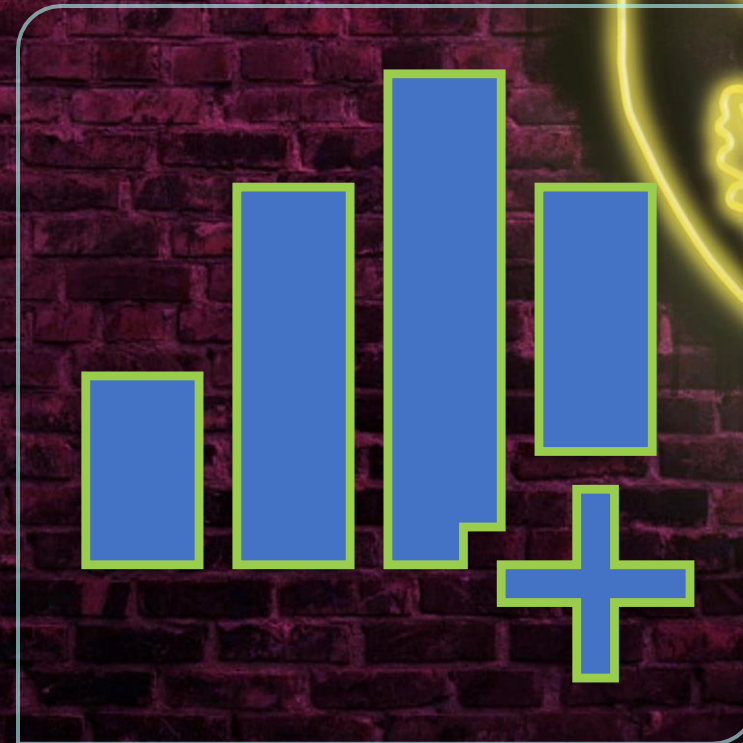
DESCRIPTIVE ANALYTICS

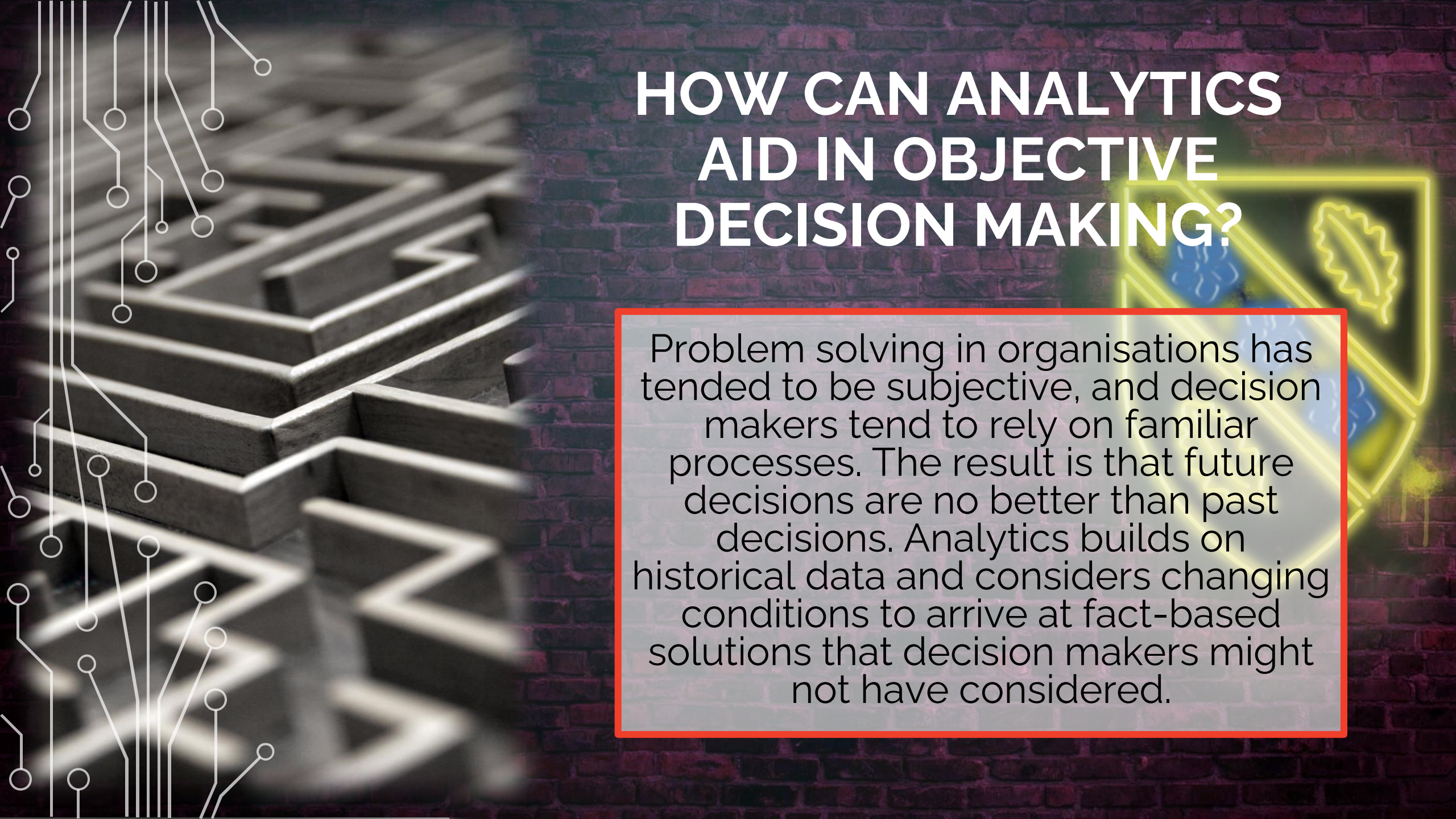
A rectangular box with a red border containing text. The background of the box is a dark red brick wall. A yellow shield-shaped graphic with a lightning bolt is visible on the right side of the box.

Descriptive analytics refers to knowing what is happening in the organisation and understanding some underlying trends and causes of such occurrences. Tools used in descriptive analytics include data warehouses and visualisation applications.

HOW IS DESCRIPTIVE ANALYTICS DIFFERENT FROM TRADITIONAL REPORTING?

Descriptive analytics gathers more data, often automatically. It makes results available in real time and allows reports to be customised.





HOW CAN ANALYTICS AID IN OBJECTIVE DECISION MAKING?

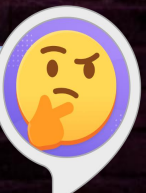
Problem solving in organisations has tended to be subjective, and decision makers tend to rely on familiar processes. The result is that future decisions are no better than past decisions. Analytics builds on historical data and considers changing conditions to arrive at fact-based solutions that decision makers might not have considered.

WHAT IS BIG DATA ANALYTICS?

The term Big Data refers to data that cannot be stored in a single storage unit. Typically, the data is arriving in many different forms, be they structured, unstructured, or in a stream.

Big Data analytics is analytics on a large enough scale, with fast enough processing, to handle this kind of data.

Where do we get big data from?



CRITICAL PERSPECTIVE



"Most business is probabilistic.
But everybody in business wants
to prove and pretend it's
deterministic.

So every spreadsheet in some
way is an act of pretense. Because
it's past information which you
pretend has wonderful predictive
value. As if it's Laplace's Demon.
But it really doesn't, because
weird shit happens out of
nowhere all the time."

Rory Sutherland (2025)
Behavioural economist



NEXT WEEK WE WILL BEGIN THE SESSION
WITH YOU EXPLAINING TO ME
THE CONCEPT OF LAPLACE'S DEMON!

