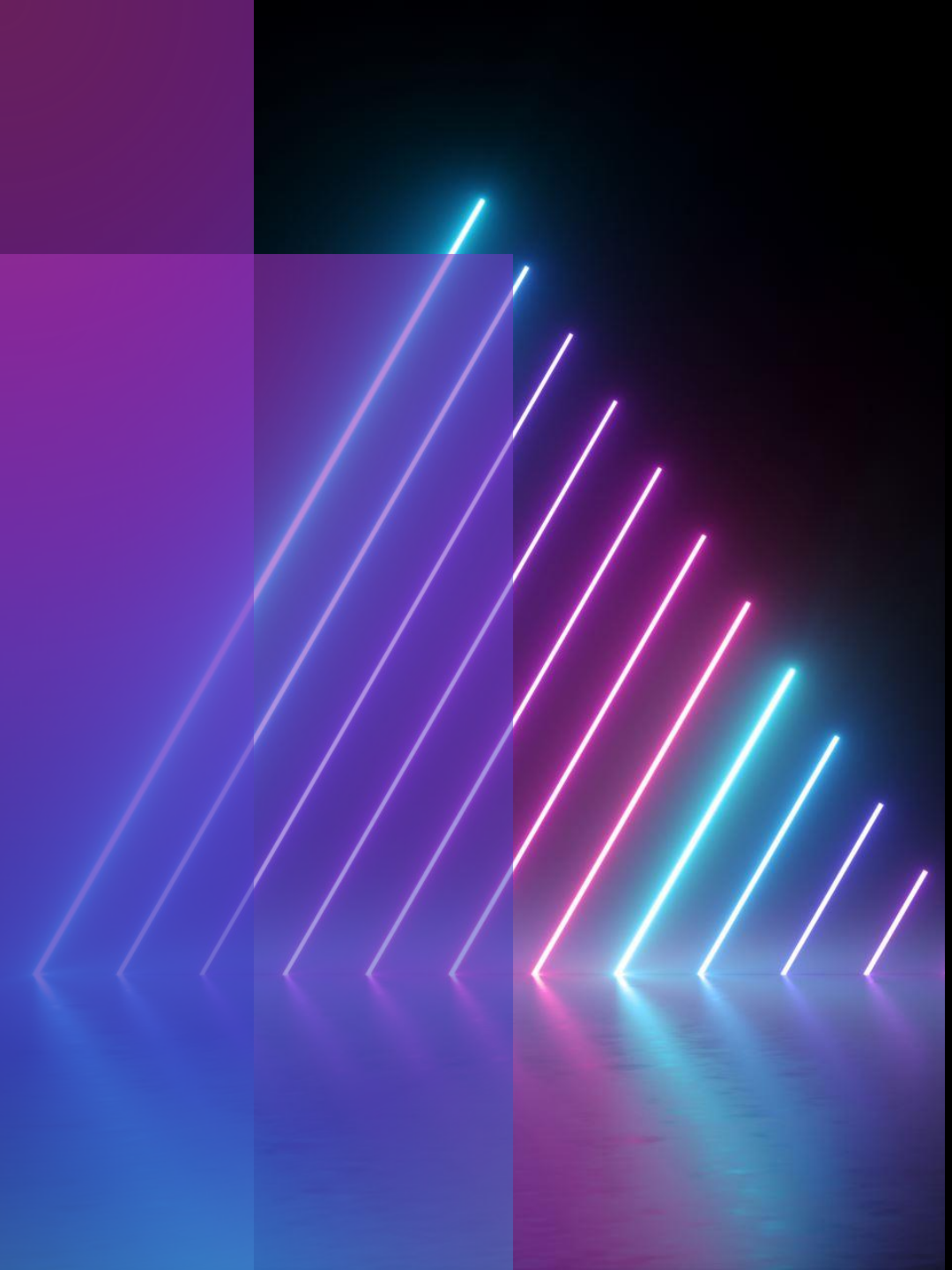


SYSTEM INTEGRATION

John Vincent Bonza

What is System Integration?

is the process of combining different subsystems or components of a larger system into a unified whole.

What is System Integration?

In the context of technology and software development, system integration involves making different software systems and hardware devices work together as a coordinated and cohesive unit.

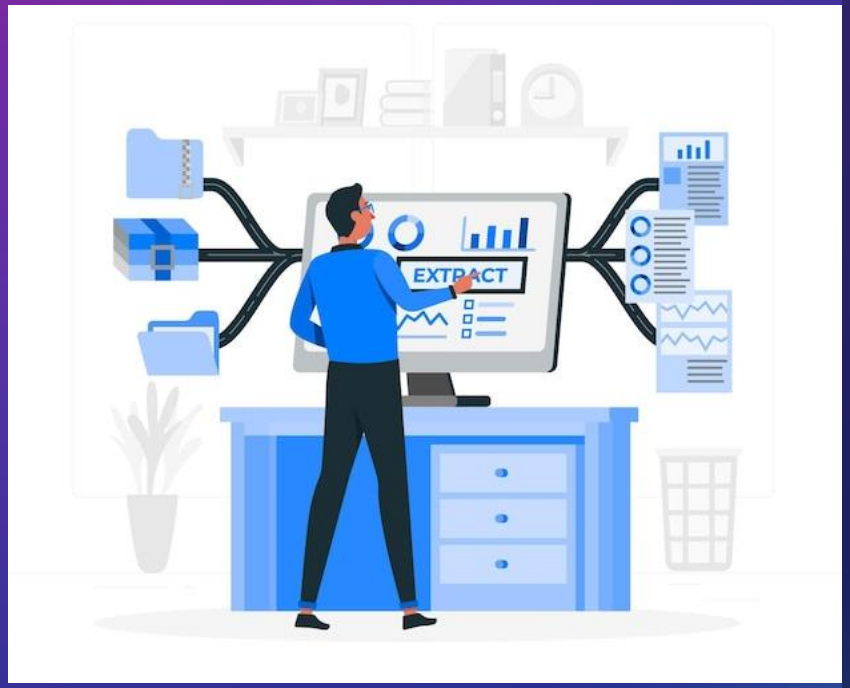
Some key aspects of system integration

- Connectivity
- Data Flow
- Functionality
- Interoperability
- Testing
- Scalability

Connectivity

System integration ensures the seamless flow of data between different subsystems.

Data Flow

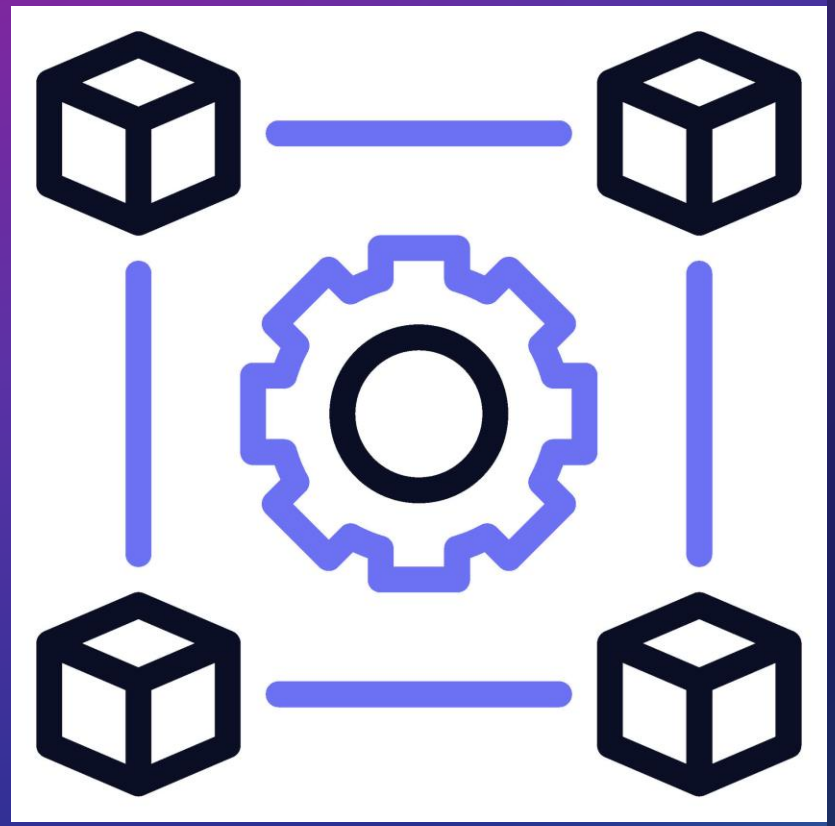


Integration involves establishing connections and communication pathways between different systems or components.

Functionality

The integrated system should perform functions that may not be achievable by individual components alone.

Interoperability



Components from different vendors or developers may have different specifications or standards.

Testing

Rigorous testing is a crucial part of system integration to identify and resolve any issues that may arise during the combination of subsystems.

Scalability

Integrated systems should be designed to be scalable, allowing for the addition of new components or the expansion of existing ones without significant disruptions.

Integrated program planning

Integrated Program Planning

are the specific kind of enterprise systems to integrate data across and be comprehensive in supporting all the major functions of the organization.

Enterprise Resource Planning (ERP) system

Enterprise Resource Planning (ERP) system

Integration is a cornerstone of today's enterprise environments with their multitude of enterprise resource planning (ERP) systems.

Evolution of ERP

1960

1970

1980

1990

2000

- INVENTORY MANAGEMENT AND CONTROL

Evolution of ERP

1960

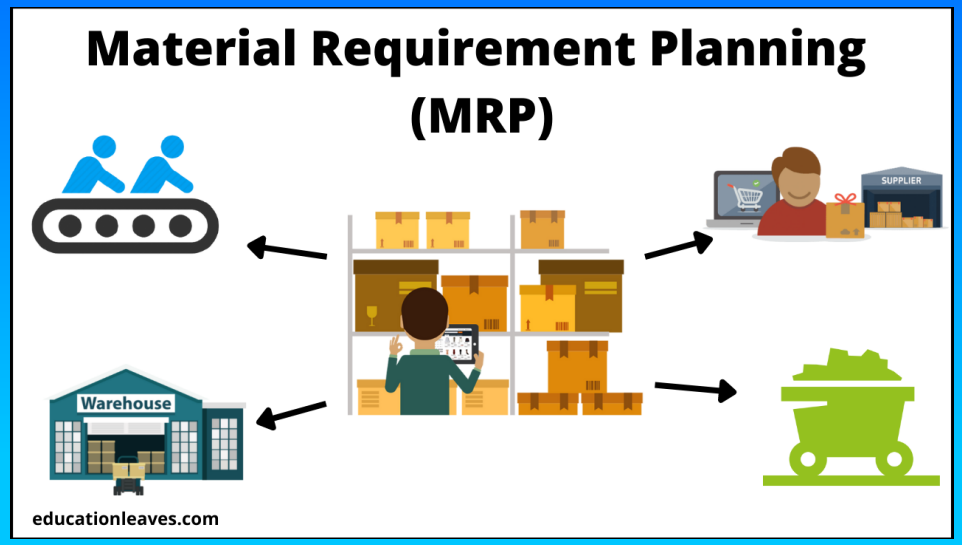
1970

1980

1990

2000

MATERIAL REQUIREMENTS PLANNING (MRP)



Evolution of ERP

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1980

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MANUFACTURING REQUIREMENTS PLANNING (MRP II)

Evolution of ERP

1960

1970

1980

1990

2000

ENTERPRISE RESOURCE PLANNING (ERP)

Evolution of ERP

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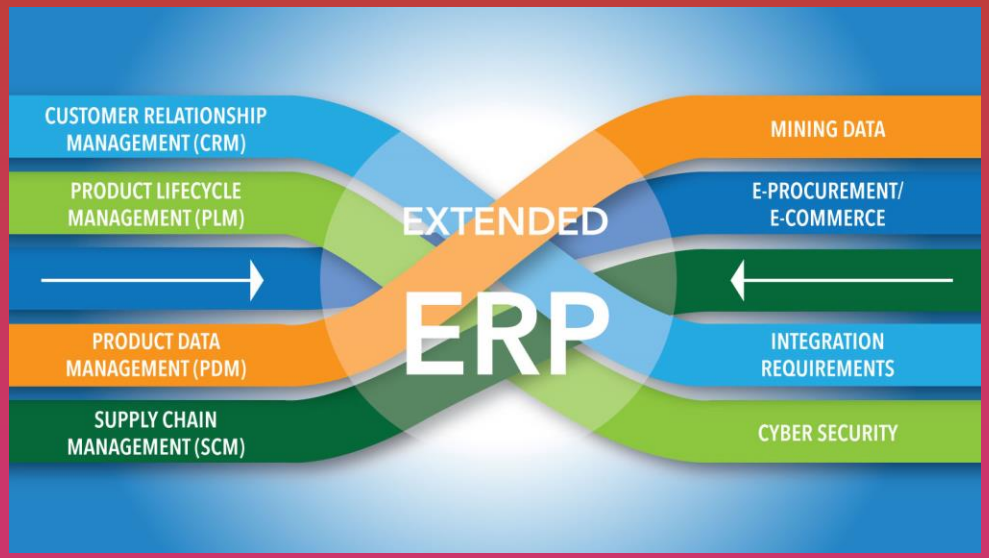
EXTENDED ENTERPRISE RESOURCE PLANNING (ERP II)



Five (5) Key Questions in the Planning Stage

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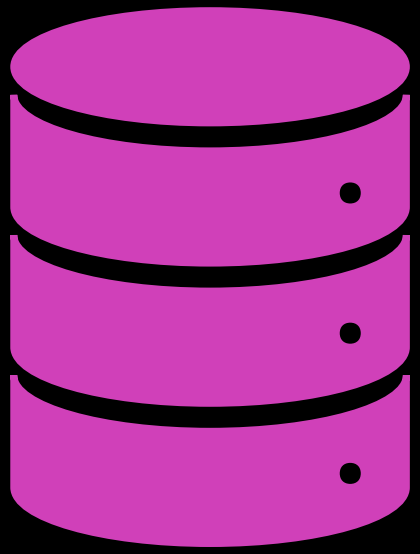
1. What is the data that the target system requires to complete the integration task?
2. Where is the data required by the target system located in the source system, and what transformations are needed?
3. What is considered a transaction within the integration task and are there any dependencies between the transactions?
4. How will you connect to the target system (domain name, IP, etc.) and what security constraints apply (certificates, credentials, etc.)?
5. What interface options do you have available (REST, SOAP, Custom, etc.)?

Can be simply to...

1. Data Requirements
2. Data Mapping and Transformations
3. Transaction Definition and Dependencies
4. Connection and Security
5. Interface Options



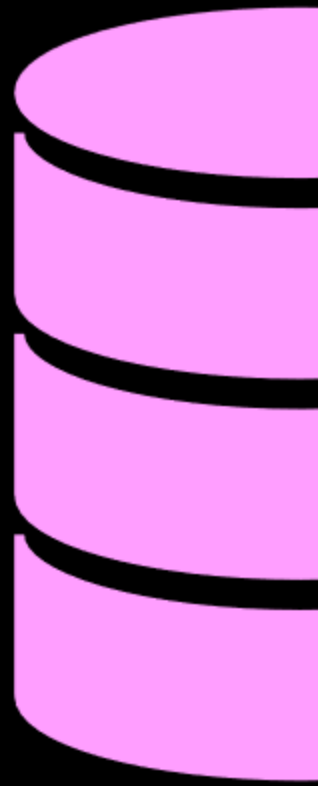
Data Requirement

What is the data that the target system requires to complete the integration task?

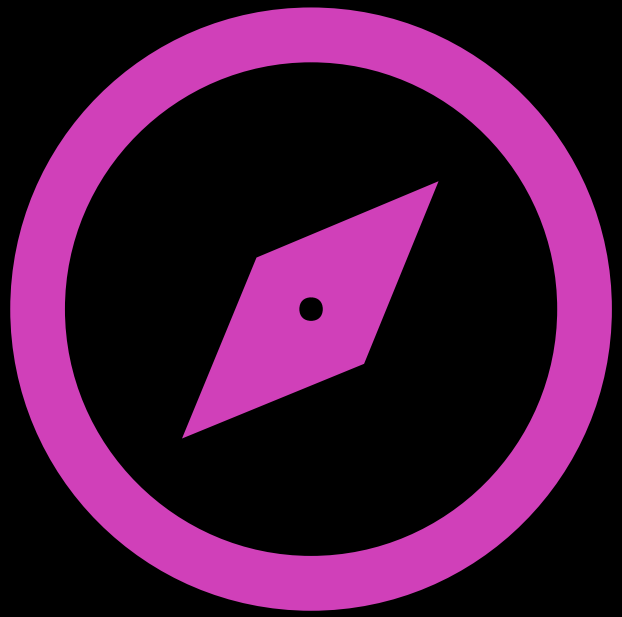
Data Requirement

Understanding the specific data requirements of the target system is fundamental.

It defines what objects or tables need to be accessed, and the rules the data needs to comply to.



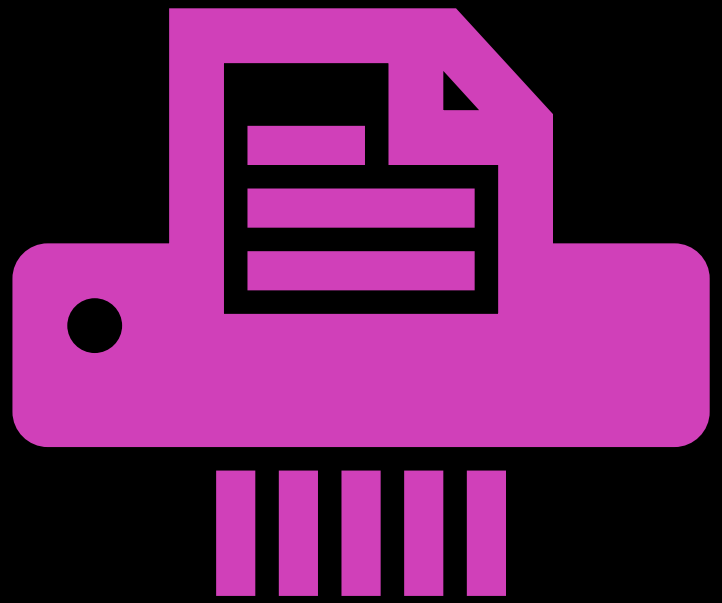
Data Mapping and Transformations



Identifying the location of required data in the source system is crucial for mapping and transformation processes.

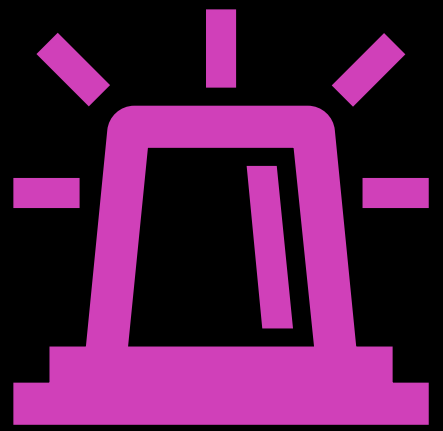
It also prompts consideration of any necessary data transformations to ensure compatibility between systems.

Transaction Definition and Dependencies



Defining a transaction and understanding dependencies is essential for maintaining data integrity during integration.

It helps in designing processes that ensure consistency and reliability, especially in scenarios involving multiple steps or systems.



Connection and Security

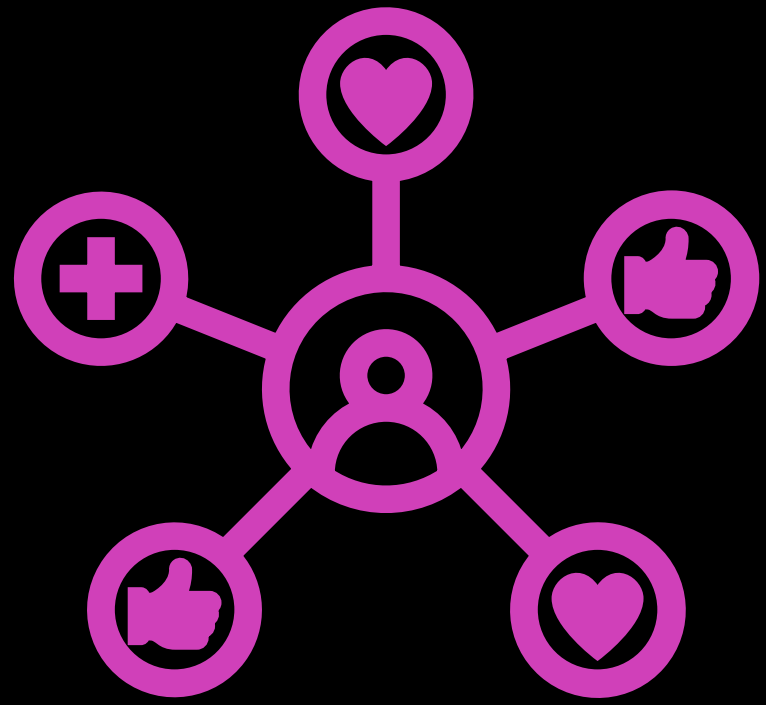
Addressing connectivity and security considerations is paramount.

Knowing how to establish a secure connection and understanding the required credentials or certificates ensures the confidentiality and integrity of the integrated data.

Interface Options

The choice of interface plays a significant role in determining how systems communicate.

Understanding available options, whether RESTful APIs, SOAP services, or custom interfaces, guides the selection of integration technologies and tools.



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THE END

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