



## **Digitalization:**

Insights from Requisite Organization

**Digitalization** is about employing digital technologies to transform the information nature of work and improve process efficiency

To understand Digitalization it is to be clear about the nature of work that Digitalization is aimed to transform

Dr Elliott Jaques was a leading thinker on the issues of nature of work and its components.

### Requisite Definition of Work and related terms

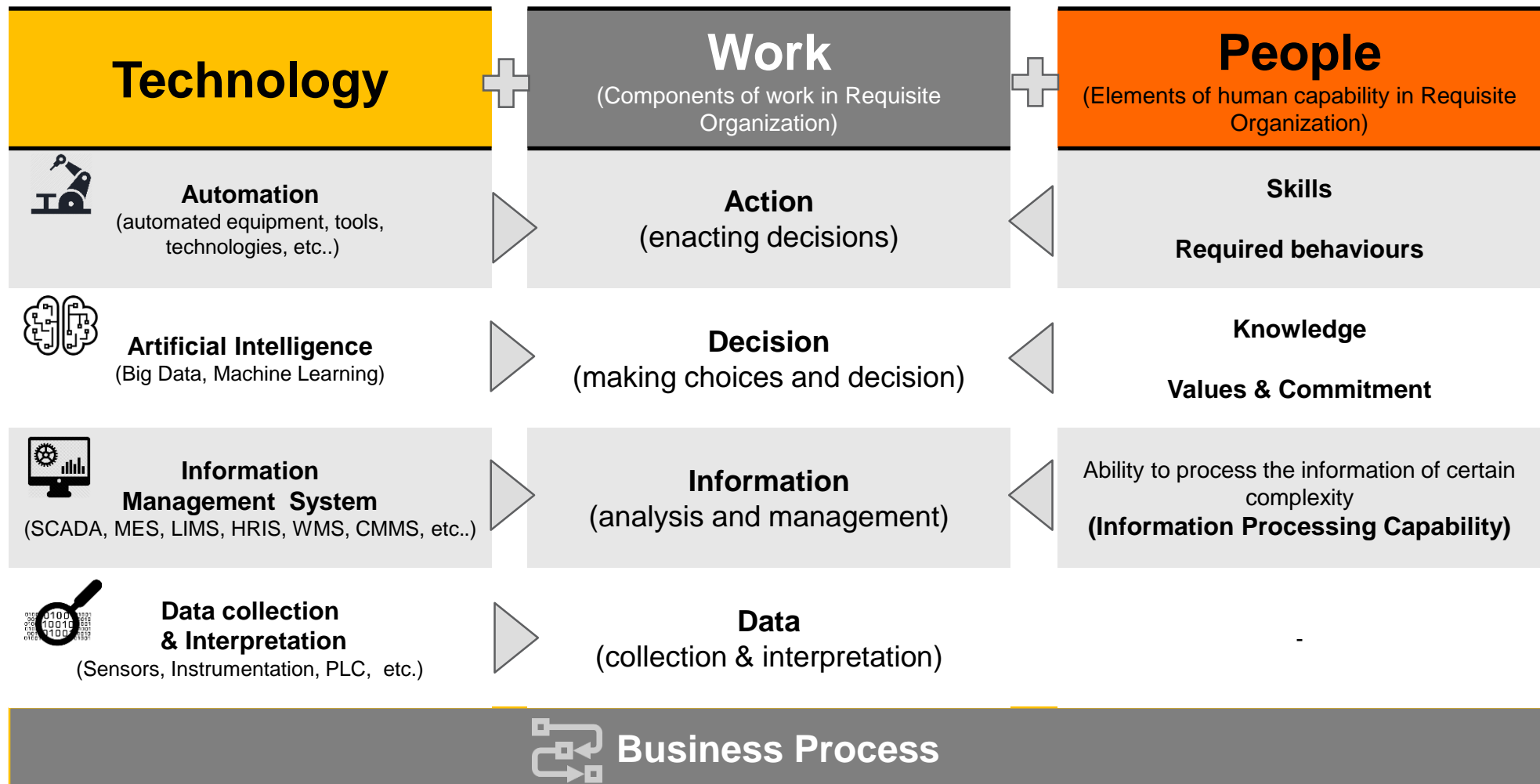
**Work** – the exercise of **judgement** and discretion in **making decisions** in **carrying out and enacting** goal directed activities

**Judgement** – the weighing up of the factors in a problem, interplaying **verbalizable knowledge and data** and **non-verbalized mental processing** in relation to each other, in trying to arrive at a decisions

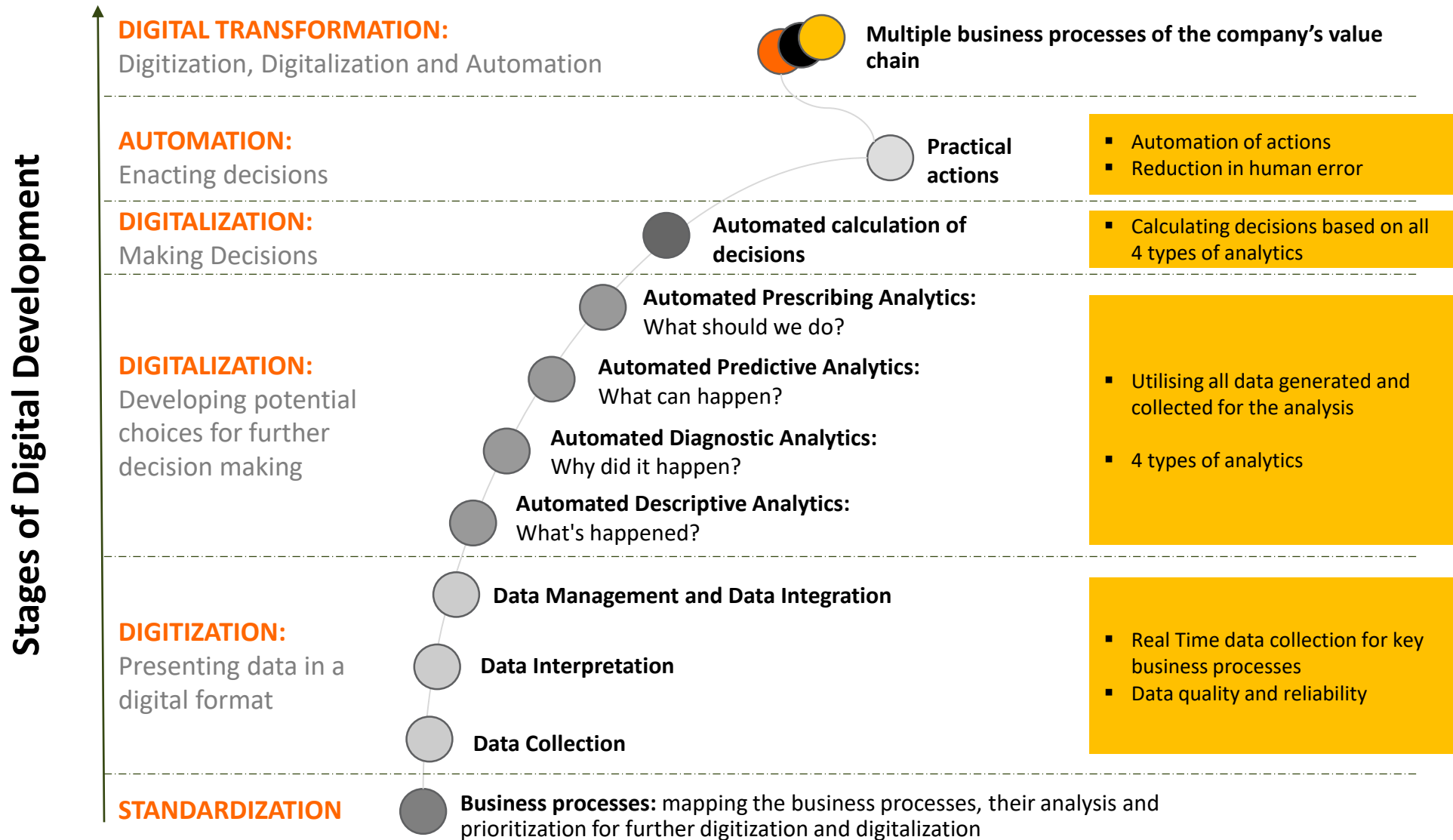
**Metal / Information Processing** – the use of a particular mental process for handling **information** in order to do work.

**Decision** – the **making of choice** with the commitment of resources

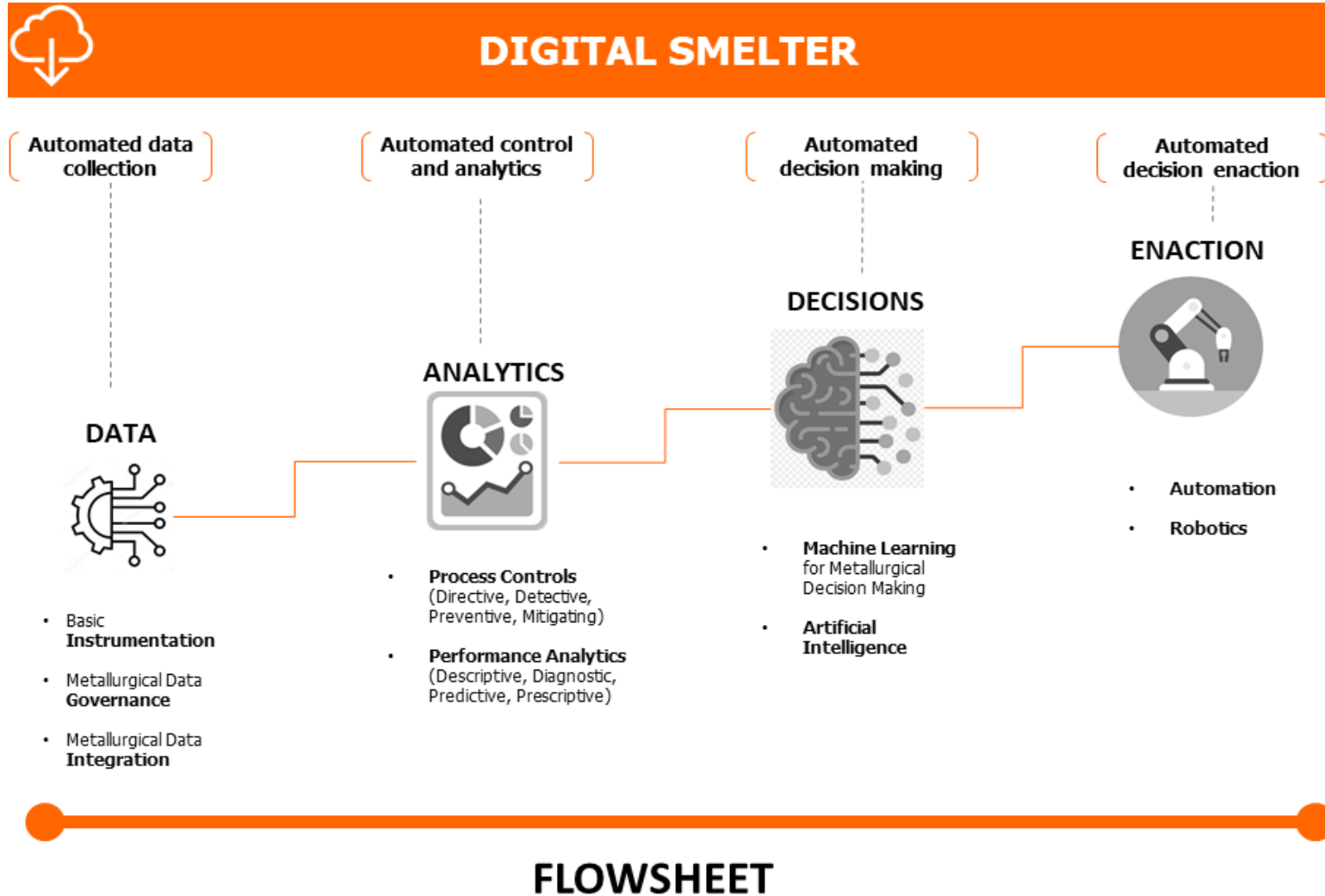
**Requisite Digitalization** is about employing digital technologies to transform the nature of work and improve process efficiency using the **definition of work** developed by Dr Elliott Jaques



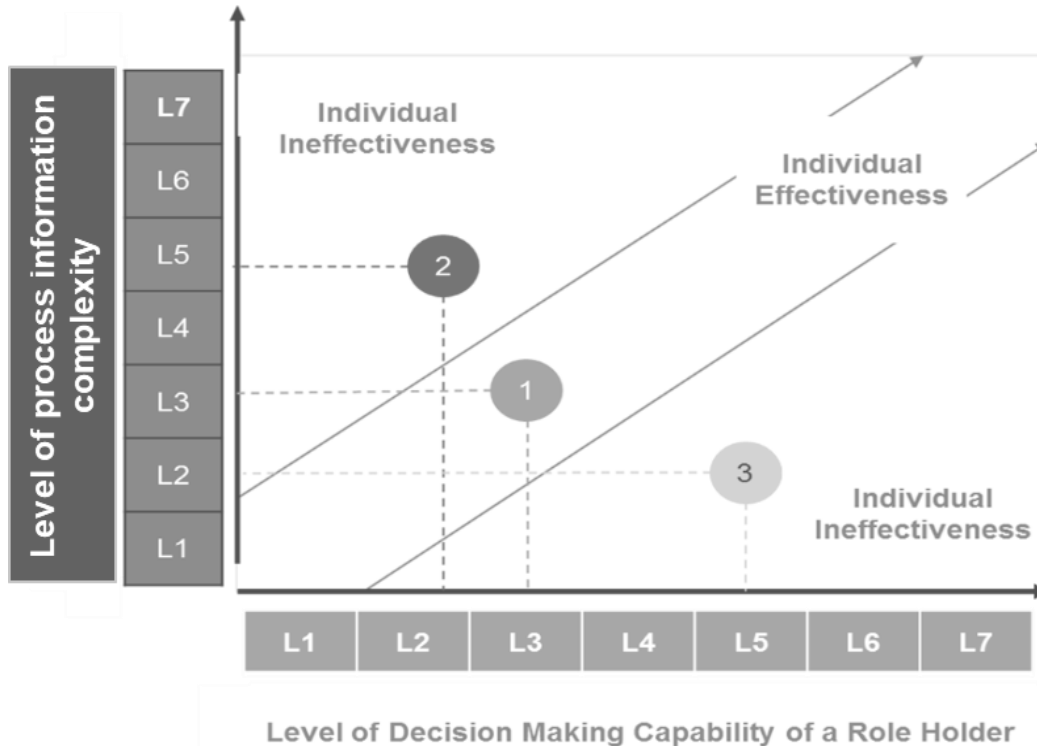
Requisite Digitalization Audit can be performed to identify the current stage of the digital development of a business process using the definition of work by Dr Elliott Jaques



**Digital Smelter** is a cost-effective automation of metallurgical data collection, measurement, metallurgical process performance analysis, metallurgical decision making and enaction of metallurgical decisions that involves **multiple metallurgical units**



**Information Processing Capability of a Process** is a match between the information complexity level of a process and the level of information processing capability of the employee accountable for the process and decision making within the process



1 **Level of process information complexity is matched with level of information processing capability of an accountable employee**

- Effective decision making
- Employee engagement and job satisfaction
- High level of employee retention

2 **Level of process information complexity is higher than level of information processing capability of an accountable employee**

- Information excess and over-load
- Over-complicated ineffective decisions
- Low level of employee engagement and job satisfaction
- Low probability of employee retention
- Burnout

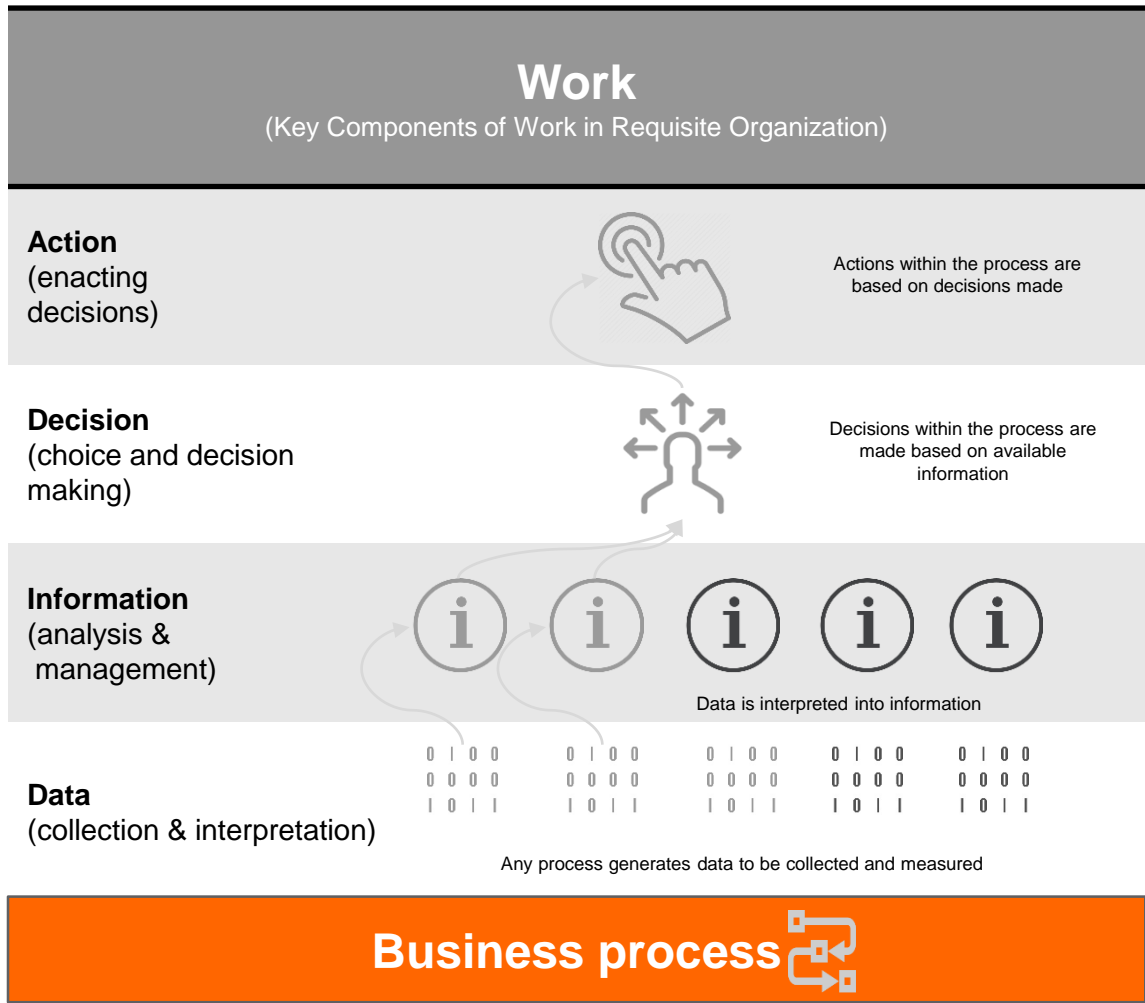
3 **Level of process information complexity is lower than level of information processing capability of an accountable employee**

- Lack of attention to details
- Over-complicated and ineffective decision making
- Low level of employee engagement and job satisfaction
- Boreout

### In Requisite Organization:

- ✓ 8 levels of process information complexity
- ✓ 8 levels of information processing capability of an employee
- ✓ Unique methods to measure the process information complexity and information processing capability of employees

**Overall Information Effectiveness of a Process** is % of the data generated nu the process that is made available by collection, measurement and interpretation and utilised for effective decision making within the process



**Goal**

0 1 0 0    0 1 0 0  
0 0 0 0 → 0 0 0 0  
1 0 1 1    1 0 1 1  
Increase % data generated by the process that is collected and measured

0 1 0 0    i  
0 0 0 0 →  
1 0 1 1  
Increase % available data that is utilised and interpreted into information

**Technologies**

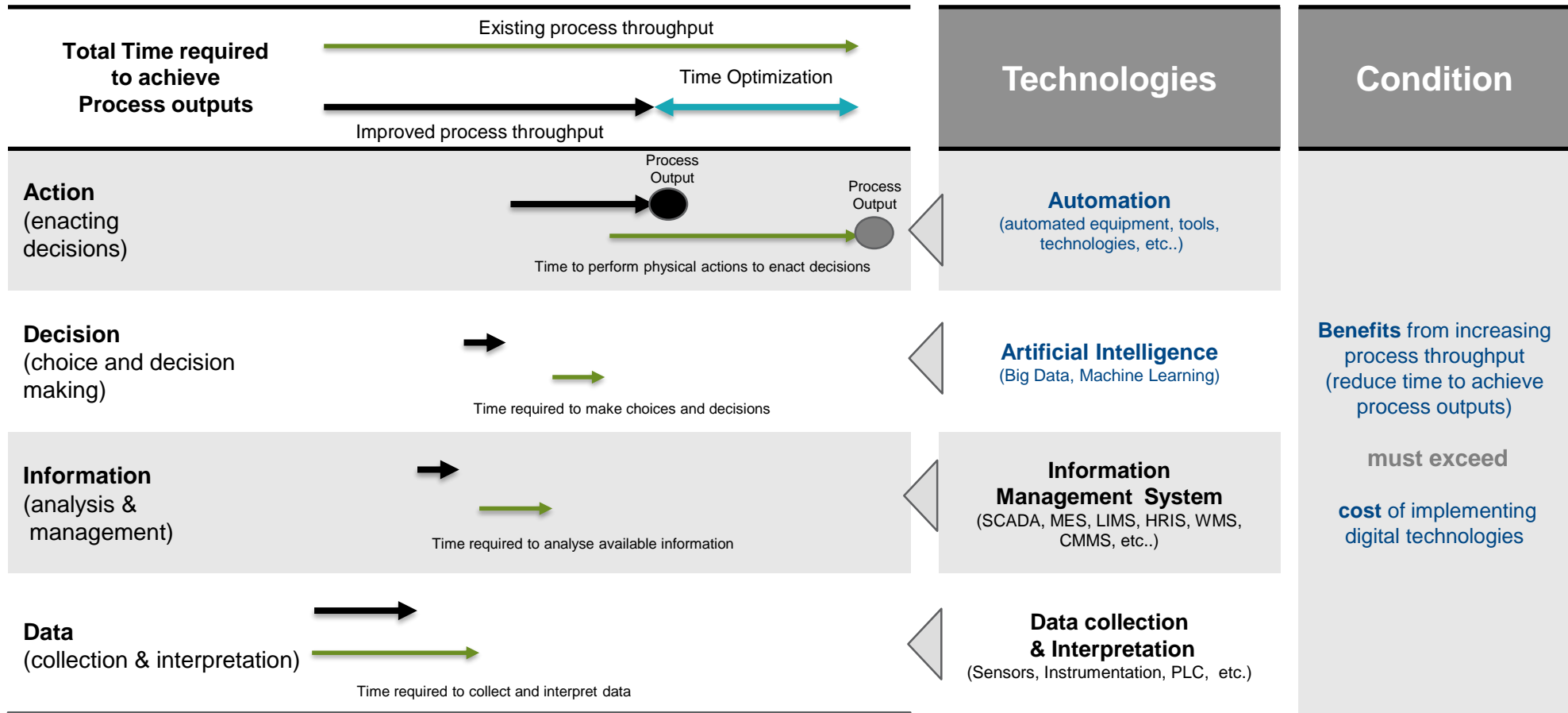
**Data Collection & Interpretation**  
(Sensors, Instrumentation, PLC and etc.)

**Condition**

**Benefits** from improving the quality of decisions made  
**must exceed**  
**Costs** of data collection and interpretation using digital technologies

**Process Decision Cycle Time** is time required to make / calculate decisions and enact them to deliver the outputs of the process

**Goal:** reduce Process Decision Cycle Time by employing the digital technologies to transform the nature of the process work

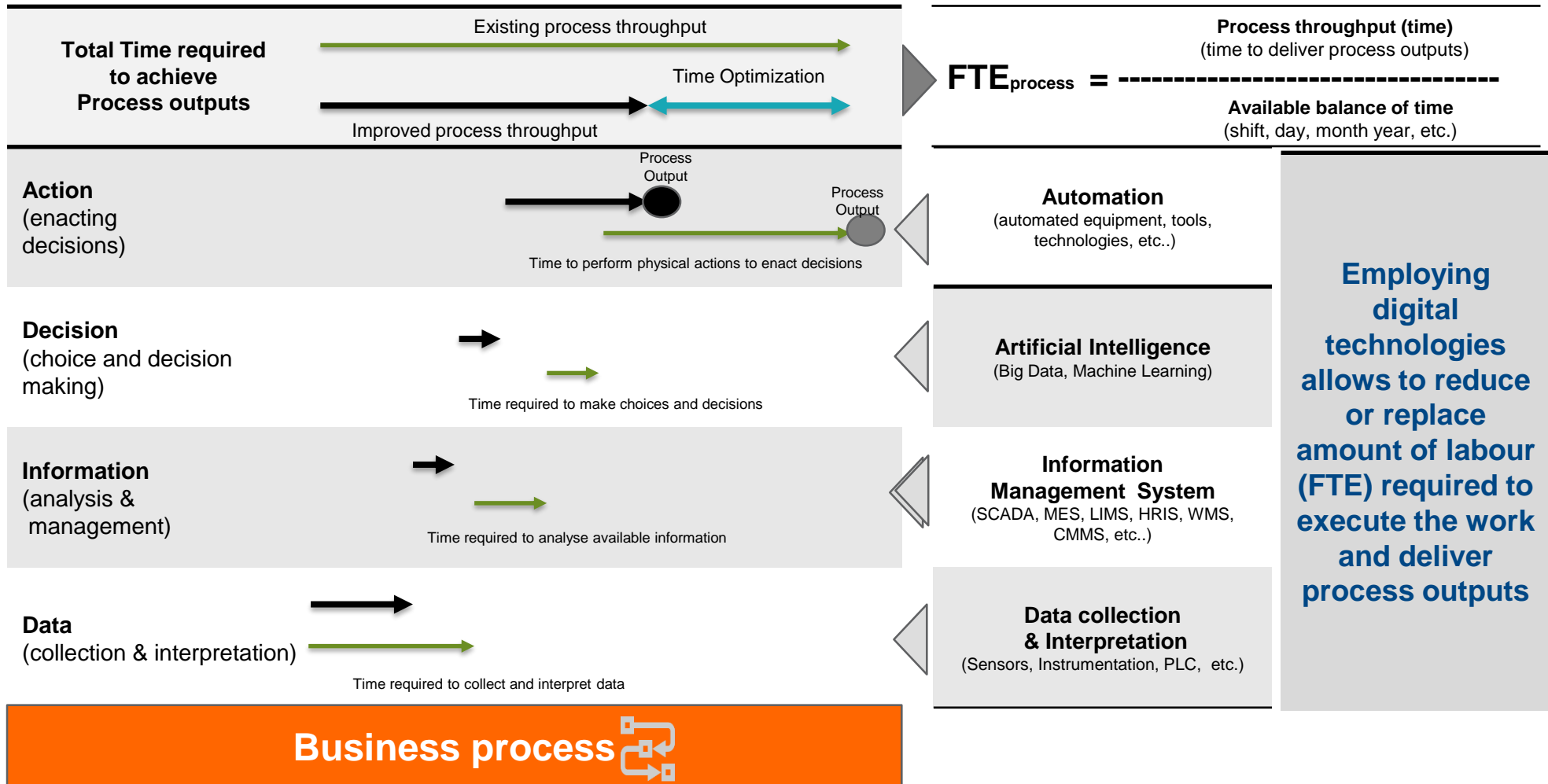


**Business process**


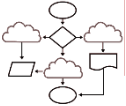







**Labour Productivity of a Process** is an amount of labour (FTE – Full Time Equivalent) to execute the work of the process

**Goal:** reduce labour resources in FTE required to perform the work and deliver the process outputs by employing digital technologies to transform the nature of work components



**Requisite Digital Assessment** is the procedure aimed at identifying and evaluating the potential for process digitalization (cost & benefits analysis):

	<b>Step</b>	<b>Step Description</b>
	<b>Process Selection for Assessment</b>	<ul style="list-style-type: none"> <li>• Process selection for digital assessment is based on process cost (time, labour, materials,), criticality of the process for the value chain), etc.</li> </ul>
	<b>Process Information Map</b>	<ul style="list-style-type: none"> <li>• Developing the map of the process</li> <li>• Describing the components of work required to deliver the process outputs (data, information, decisions, actions)</li> <li>• Localising time and labour resources per component of work</li> </ul>
	<b>Process Information Complexity</b>	<ul style="list-style-type: none"> <li>• Identify the level of information complexity of a process based on process outputs, type of decision making, complexity of data within the process</li> </ul>
	<b>Information Processing Capability of Employees</b>	<ul style="list-style-type: none"> <li>• Identify the levels of information processing capability of the employees accountable for the process and decisions within the process (use of managerial judgement and computerised assessment of information processing)</li> </ul>
	<b>Information-based Process Efficiency</b>	<ul style="list-style-type: none"> <li>• Evaluate the indicators of information-based process efficiency such as: overall information effectiveness, information-based process throughput, information-based process capability, information capability of a process, etc.</li> </ul>
	<b>Digital Technologies</b>	<ul style="list-style-type: none"> <li>• Mapping existing digital technologies used within the process</li> <li>• Identifying available digital technologies on the market and related to the components of work within the process</li> <li>• Evaluating the cost &amp; benefits from applying available digital technologies (their impact on the components of work within the process)</li> </ul>
	<b>Digital Transformation</b>	<ul style="list-style-type: none"> <li>• Developing and implementing the plan to perform the digital transformation of the process</li> <li>• Monitoring the economic impact of process digital transformation</li> </ul>



The **Requisite Organization International Institute** was established in 1999 to provide support and services to those engaged in implementation and further development of the work on human organizational development begun by Elliott Jaques as Stratified Systems Theory over sixty years ago

- **Provide access to and authoritative knowledge** about the full body of work in human organization and human capability developed by Dr. Jaques (and colleagues)
- **Provide authoritative guidance for the development of tools and resources** which contribute to and support the implementation of Requisite Organization (RO) in organizations and institutions around the world
- **Provide guidance and support to those seeking to conduct research** and development in the Institute's specialized areas
- **Ensure that Jaques' body of work, known as Requisite Organization, becomes the standard by which all other organizational development programs are measured**



delivers a unique range of **integrated project support services** across a **full array of industries** by bringing together **specialists** with different expertise to ensure **successful project delivery** for our clients



### Unique Methodologies

based on Industry Best Practices & Requisite Organization

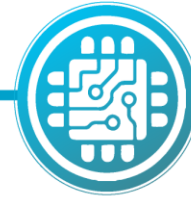
- Requisite **Mining**
- Requisite **Metallurgy**
- Requisite **Maintenance**
- Requisite **Integrated Planning**
- Requisite **Production**
- Requisite **Project Management**
- Requisite **Safety**



### Subject Matter Experts

**Our Team includes:**

- Requisite Organization Experts
- Mining Engineers
- Chemical Engineers
- Mechanical & Electrical Engineers
- Production & Industrial Engineers
- Safety Engineers
- Project Managers



### Digital Technologies

**Partnering with industry best providers of digital technologies:**

- Open Pit Mining
- Underground Mining
- Metallurgy Intelligence
- Asset Management
- AI & Virtual Reality



### Worldwide Applications

- Australia
- Africa (Namibia, DRC Congo, Zambia, Ghana, South Africa, Mozambique, etc.)
- South America (Chile, Argentina)
- North America (USA, Canada)
- Europe (UK, France, Ireland, Sweden, Russia & CIS, etc.)