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Perpetua Perspectives: What is Digital?

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Digital...

There are too many different definitions. They're incomplete, too academic, too superficial, and most of them inaccurate. And almost all of them focus too much on the wrong thing...Information Technology (IT).

I can hear it..."Wait...what? Why do you think digital isn't about technology?"

That's not what I said...hang in there with me.

I have a passion for digital. Not because it includes technology, but because it intersects and touches every aspect of a company...and technology is just a vehicle. So, instead of trying to create a definition and how it should be applied for every business – I want to bring it back to core concepts and evolve it later.

WHAT IS DIGITAL?

The Core Concept

In every subject or discipline there is a core element – the smallest building block on which everything in that discipline is built.

In chemistry it's the atom, in history it's time, in math it's a number, in language it's letters and words, and in medicine it's a cell.

In Digital...It's Data.

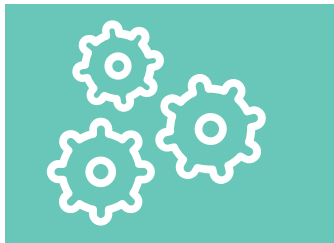
What makes digital a little different than those other disciplines is - as data is the building block of digital - all the building blocks like atoms, time, numbers, letters, words, and cells from those other disciplines are data, too.

All disciplines are being digitized - no longer just physical, material or manual - a “digital twin”. Technology is only the vehicle.

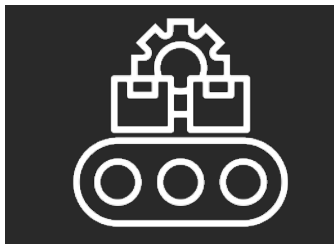
This is core element to the fourth industrial revolution...or “Industry 4.0.”

The Chronology

The industrial revolution has become an industrial evolution – encompassing four distinct phases, to date:



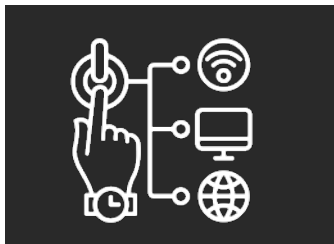
Industry 1.0 – Machinery. The replacement of individual labor and hand-built products with machines. The use external power in the form of water and steam.



Industry 2.0 – Production. The optimization of the individual elements across a production process with more machines focused on speed, quality, and accuracy of the process. The emergence of management practices and culture was critical in this interconnectivity phase of internal optimization.



Industry 3.0 – Automation. Improvement of the core operational processes within a business, including the production process and those directly supporting production. Enterprise Resource Planning (ERP) system and computers emerged. Labor was again reduced within the company.



Industry 4.0 – Digitization. The speed, quality and accuracy of a company’s data and interconnectivity across the company’s ecosystem. Smart devices and data analytics emerged.

The move from Industry 3.0 to 4.0 has some interesting parallels to the move from Industry 1.0 to 2.0, so it’s important to take a deeper look at Industry 3.0 to make the comparison.

The Progression

First, Industry 3.0 applied to all businesses, not just manufacturing. The core operations of companies in industries like retail, financial services, entertainment, and hospitality were also automated, although not typically defined as an Enterprise Resource Planning (ERP) system. In all cases, built internally or bought from provider, these were the first and most comprehensive vehicles for the data specific to a single company's operations. Visibility and real-time sequencing of events within the core operations could be outlined, measured, and improved.

Automation also increased complexity within a company as technology systems governing other functions within a company emerged. Other "functional systems" like Human Resource systems, Product Lifecycle systems, customer management systems, e-Commerce, service or case management, and even systems to support the delivery of services within a business were adopted.

Most importantly, the timeframe around Industry 3.0 also included the emergence of a technology-centric industry, e-Commerce, which enabled companies in industries closest to the end-consumer to directly transact with that consumer.

These areas of specialization and siloed approach to technology and data within a company, combined with the accelerated end-consumer requirement and consumption of data, began to challenge all companies in how to manage its "master data" across the internal enterprise.

The Parallel

The same leap from Industry 1.0 to 2.0, individual building blocks to an interconnected production process, is occurring in Industry 3.0 to 4.0 with data. In this case, the process isn't centered around the management the product across the production process...it's about the management of data across the consumers of that data, both internal and external.

Since the smallest building block in Industry 4.0 is data, the ability for a company to effectively manage the accuracy, reliability and speed of access to data internally has a direct effect on how successful the company will be in the interconnected world of digital.

Just like it's possible to suboptimize the production in manufacturing by focusing only on the mechanization of a single part or part of the process, a company focusing on disparate sources of data internally will see its ability to retrieve and use that data in the company or more importantly in Industry 4.0 as sub-optimal – data across the market...customers and suppliers.

This isn't a new concept. It's one of the four parts of Deming's "System of Profound Knowledge"... "Appreciation of a System."

The difference is the change in application. Shifting from requiring human intervention to move the information (data) from one step in the process to another.

Productionizing the flow of data between entities in the ecosystem, whether those entities are people, "things", other companies, or other technology systems IS DIGITAL.

The External Threats

Companies, and even entire industries, have external and internal obstacles to overcome evolving their digital approach.

The external threat is no longer relegated to a company's competitors.

Enter the "disruptor".

Disruptors have embraced data, via technology, to serve the market with information and access to information. Companies who have not evolved their data capabilities to reach forward (customer) and backward (supplier) in the supply chain have been disrupted in every B2C industry. And the disruptors, who produce nothing, have been handsomely rewarded.

Amazon is a "prime" example in retail. They made nothing and for many years had no physical or tangible assets as a company. They were completely digital.

B2B companies are starting to experience this disruption with technology-based intermediaries.

Am I suggesting that every company needs an eCommerce engine...no!

But if a company cannot find a way to embrace the data needs of their market (customer, supplier, partner, employee) – digital intermediaries will.



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The Internal Threats

The internal obstacles are equally, if not more, challenging – especially in laggard B2B industries (manufacturing, CPG, Oil & Gas) and in lower areas of the market (sub-\$1 billion in annual revenue).



Mindset - Technology is not a “one-and-done” investment. Evolution of data accuracy, reliability, and speed is an ongoing and evolving function of a business.

Private equity firms who acquire and own these companies have very specific, and sometimes outdated, ways of evaluating and improving company performance and investing in digital evolution. They focus largely on internal operations (EBITDA, headcount, and other internal markers of performance) which doesn't accurately indicate how well a company has digitized and is positioned in industry 4.0.

Leadership in these same companies is primitive. They aren't data-savvy. Their organizations revolve around manual processes and are people-dependent. While promoting strategies like “customer centricity”, the approach is reactionary, department-specific and fragmented vs a winning approach in a digital company...allowing that customer to serve themselves with access to data.



Culture - The workforce is changing. The new generation of employees has an expectation for data maturity, speed, and accuracy. They have grown up using technology as their primary vehicle for information and that expectation carries over to their role as an employee within a company.

Data science and analytics are two of the fastest growing career fields in industry. Data entry and data management should be automated as they directly inhibit accuracy, reliability and speed.

People will have a direct impact on Return-on-Investment (ROI) and adoption. ROI will directly correlate to the internal and external people it engages in strategy, selection and adoption...not just the technology. And adoption will depend on who in the organization is engaged, their ability to adapt and adopt and an experienced transformation or project management office to oversee.

The Internal Threats cont.



Operational Processes- Companies confuse “data” with its vehicle, technology. They continue to make the mistake of focusing on siloized people and technology approaches to managing their data, while the internal and external data demand grows. Being data-savvy doesn’t require owning your own technology.

Even one of the oldest disciplines in the world, Finance, can’t avoid the impact of digitization. The emergence of cloud and data platforms has changed accounting regulations, account structures and management of technology spend. The days capital investments to license ERP and bury them below the line are coming to an end.



Systems - Term “ERP” is outdated. It does not fully encompass the comprehensive data necessary to interconnect and engage a company’s customers, suppliers, partners, and employees in the market.

It is an “Industry 3.0” term for a subset of business functions and data.

Companies successfully positioned for Industry 4.0 think broader in terms of systems. They think “outside-in”...outside drivers of data influencing internal strategies including technologies, people and processes.

Having a successful digital playbook to address internal and external threats and enable data accuracy and consistency across the company is not an “IT” strategy...it’s a business strategy.



The Opportunity

This has become increasingly more evident over the past couple of decades as more of the services we as consumers pay for are based on data. Mobile phones, internet speeds, and storage of information are easy, quick examples we see every day.

Or...”Google it”...and see who pays to have their data show up.

This concept makes every company a “bank”.

How companies capitalize will depend on their ability to harness this new revolution and adapt to the requirements within their markets, which the data presents to them. How they “spend” or accumulate their new currency will determine their future success.

WHAT IS DIGITAL?

A NOTE

Chief Digital Officer



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Perpetua is a Business Transformation and Operating company, specializing in C-Level technology leadership and information technology services with a unique operator mindset and approach to advise, transform and operate technology for M&A and digital evolution. We bring a playbook and ecosystem of partners to accelerate value from business transactions. Perpetua specializes in privately held, private equity growth companies between \$30M and \$300M in annual revenue in the manufacturing, CPG, Field Services, and logistics industries.

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