DIGITIZATION, DIGITALIZATION AND DIGITAL TRANSFORMATION

As the hype around digital transformation continues to persist, the terms "digitization" and "digitalization" join the fray, increasing the level of hype while adding confusion.

In reality, these three terms have distinct meanings, or at least we can make them distinct depending on which authority we're listening to. This question is more than semantics exercise, however. People are confusing them in ways that shortchange the power and importance of digital transformation, thus putting the survival of their organizations in peril.

(1) Digitization: The Straightforward Term

Digitization essentially refers to taking analog information and encoding it into zeroes and ones so that computers can store, process, and transmit such information.

According to Gartner's IT Glossary, "**Digitization** is the process of changing from analog to digital form" - a definition few would disagree with. There are many examples of digitization in enterprises today, as there have been for many decades. Converting handwritten or typewritten text into digital form is an example of digitization, as is converting the music from an LP or video off of a VHS tape.

In the enterprise context, digitization is important both for dealing with analog information as well as "paper-based" processes – where *paper-based* is nothing more than a metaphor for analog. It's important to remember, however, that it's the information you're digitizing, not the processes - that's where digitalization comes in.

(2) Digitalization: Fraught with Ambiguity and Confusion

Unlike digitization, *"digitalization"* doesn't have a single, clear definition. "'Digitization' and 'digitalization' are two conceptual terms that are closely associated and often used interchangeably in a broad range of literature," explain J. Scott Brennen, Doctoral Candidate in Communication, and Daniel Kreiss, Associate Professor, both at the University of North Carolina School of Media and Journalism. "We refer to *digitalization* as the way in which many domains of social life are restructured around digital communication and media infrastructures."

Brennen and Kreiss thus base their definition of digitalization on *social life* – in other words, how people interact. As such interactions move away from analog technologies (snail mail, telephone calls) to digital ones (email, chat, social media), both work and leisure domains become digitalized.

Gartner also weighs in on this term. "**Digitalization** is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities," according to Gartner's glossary. "It is the process of moving to a digital business." Gartner's definition is thus quite different from the academics', focusing on changing business models rather than social interactions.

The Gartner definition, however, does bring up another question – just what is a *"digital business".* "Digital business is the creation of new business designs by blurring the digital and physical worlds," Gartner's glossary espouses. Unfortunately, this latter definition is hopelessly vague. What is the digital world? What does it mean to "blur" worlds? And for that matter, what is a "business design"?

It appears that Gartner is not of one mind on its definition of digitalization, as a recent Brookings Institute report quotes an entirely different one. "Digitalization, according to Gartner, Inc., is the process of employing digital technologies and information to transform business operations," according to the report *Digitalisation and The American Workforce* by Mark Muro, senior fellow from the Brookings Research Institution. According to this definition, digitalization is more about business operations than either social interactions or business models – although clearly all of these notions are interrelated.

As organizations implement ***digital technologies*** – which in this context really means computers and other information technology – people's jobs change. Imagine factory workers putting down their hammers and lathes and instead using computer-controlled equipment, for example. According to the Brookings report, such change is at the heart of digitalization.

Automation is a major part of the digitalization story, whether it be shifting work roles or transforming business processes generally. In fact, for many people, digitalization applies primarily to such processes. "Digitalization … increases process efficiency and improves data transparency, and of course, it should help boost your top line," explain Georg Tacke, CEO of Simon-Kuchet & Partners. "If you operate an online platform, then your company may already be 80 percent digitalized, and you can gain more efficiency or create more customer value by going the remaining 20 percent of the way."

In this example, implementing the technology behind such an online platform isn't the digitalization step per se – it's *shifting the business process to such a platform*. It seems, therefore, that Gartner's definition that **ties digitalization to business operations** is on point, as such, operations consist of business processes that digital technologies can transform.

(3) Digital Transformation: Beyond Digitalization

Digitalization, however, is quite distinct from digital transformation. An organization might undertake a series of digitalization projects, ranging from automating processes to retraining workers to use computers. Digital transformation, in contrast, is not something that enterprises can implement as projects. Instead, this broader term refers to the *customer-driven strategic business transformation* that requires cross-cutting **organizational change**, as well as the implementation of **digital technologies.**

Digital transformation initiatives will typically include several digitalization projects, but executives that believe that there is nothing more to digital transformation than digitalization are making a profound strategic mistake.

In reality, digital transformation requires the organization to *deal better with change overall,* essentially making change a **core competency** as the enterprise becomes customer-driven end-to-end. Such agility will facilitate ongoing digitalization initiatives but should not be confused with them.

In the final analysis, therefore, we ***digitize information,*** we ***digitalize processes and roles*** that make up the operations of a business, and we ***digitally transform the business*** and its strategy. Each one is necessary but not sufficient for the next, and most importantly, digitization and digitalization are essentially about technology, but digital transformation is not. Digital transformation is about the customer.

Three Use Cases: Different Approaches

Case 1: Mall of the Emirates: Dubai's Mall of the Emirates uses technology solutions to run their loyalty program. Customers upload receipts from the stores to the bot which then uses OCR technology to process the receipts and allocate loyalty points to customers real-time.

Case 2: Nike: Nike allows consumers to customize and personalize their shoes via NIKEiD. They launched Stylebot on Messenger, which pulled colour schemes from pictures uploaded by the users to customize a pair of Air Max 90s. Customers could now create a special sneaker that they would treasure forever by uploading a picture that has sentimental value to them or someone they care about.

Case 3: Amazon: Families making a member wait in line with a cart while other continue looking for products is a familiar sight at most convenience stores. It's quite a frustrating experience and Amazon works on sparing customers the trouble of waiting in lines. Their Amazon Go store, equipped with their revolutionary *Just Walk Out* technology allows consumers to pick up the items they want and simply exit the store. While exiting, their Amazon account is automatically charged and they get a receipt on their Amazon app.

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