Digital Transformation and Your Value Chain
It seems that nearly three decades after MCI introduced us to the idea of the “Information Superhighway” in its now acclaimed advertising campaign featuring a young Anna Paquin in an eerily barren future foretelling a reality where “there will be no more there”—we may have arrived. It can be argued that the future that felt far away and uncertain may be today’s reality and as a result modern business is now awash in data—big, unstructured, and increasingly real-time. Digitization of data is driving digital transformation across all industries and businesses are now deploying robotic process automation (“RPA”), machine learning (“ML”), and artificial intelligence (“AI”) tools to manage all of this data, uncover new insights about customers, reduce errors, and generally drive efficient use of resources.

Digital transformation serves as an onramp for businesses to access not only the technologies available today, but those of tomorrow. 5G infrastructure, ubiquitous and basic cloud infrastructures, edge computing coupled with wide adoption of open source platforms, are supercharging the ability of people and companies to adopt and scale digital capabilities at a pace previously unavailable. This supercharged phenomenon is, at its core, what we are talking about when we speak of “digital transformation” and, the increased investments organizations are making reflect their expectation that their end to end value chains will be fundamentally reordered.

KPMG has been working with many clients over the years, within all industries, as they’ve deployed digital capabilities across their organizations. And one of the early key lessons learned is that deploying “technology” enabled solutions is not just a job for information technology (IT).

In fact, over the last decade, we’ve seen more and more roles added to the C-suite, including Chief Technology Officers, Chief Digital Officers, Chief Innovation Officers, Chief Information Security Officers, Chief Data Officers, etc. These new roles recognize that digital technologies and the data they utilize (and generate) reach beyond the traditional CIO organization and are of increasing importance across the entire enterprise. While the traditional CIO (as steward of the IT function) continues to ensure access to best in class, secure, and widely available enterprise architecture, infrastructure, applications, and productivity tools, the new C-suite and supporting roles provide direct interface(s) between the business and functional support groups and IT to ensure investments in digital solutions are properly budgeted, scoped, supported, and scaled.

As with any big initiative requiring change, many organizations have been more targeted in where they have been making digital investments—with some utilizing innovation incubator strategies for development of new revenue/business models to generate new avenues of profits, while others have focused on incremental operational expenses and internal performance improvements to improve profitability and drive long term value.

What KPMG and many of its clients experienced with the pandemic, however, was that for many companies necessity drove, or is driving, the need to accelerate those investments more broadly across the organization. The 2020 KPMG Global CEO Outlook explored this trend of accelerating digital transformation and how the global pandemic is further accelerating the transformation of businesses.

For a majority of U.S. CEOs, the COVID-19 global pandemic has meant an acceleration in digital transformation by months or even years - creating the proper structure for these digital investments can reduce tax risk and significantly optimize after tax profits for the organization.

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1 https://www.youtube.com/watch?v=480k3R6bpHY&list=WL&index=2
Global CEOs: COVID-19 Accelerated Digital Transformation

The 2020 KPMG CEO Outlook features insights from 315 CEOs at large companies globally, including 100 in the United States. “U.S. CEOs are resilient and remain optimistic as they continue to rise to meet the challenges and opportunities resulting from the pandemic and ongoing economic uncertainty,” said Paul Knopp, KPMG U.S. Chair and CEO. “They are accelerating the digital transformation of their businesses, but also see a multitude of risks apart from the pandemic—with talent risk becoming front and center in the current environment.”

74% of CEOs surveyed indicated that they were prioritizing investments in new technology and digitization ahead of workforce skills and capabilities.

What it means for tax—when digital transformation transforms the value chain

As the adage goes, “Change is the only constant.” As other executives within organizations are driving new investments in digital capabilities to identify and unlock new sources of value across the business, tax executives should be paying very close attention to how those investments are being structured - the types of assets being developed, how, by whom, and where they are being developed, and how they are being monetized. All of these changing value drivers mean disruption for your existing value chain and tax model.

How the shift in value drivers can break the tax model

Changes in your value chain may change the legal relationship between the entrepreneur entities within your MNC and the routine entities. Indeed, if new intangible assets are being created and utilized, your existing intercompany agreements may not capture those. And, if they are not reflected in your current agreements (and therefore, economic model), the organization is likely underreporting taxable profits in the correct jurisdiction as well as missing an opportunity to create tax efficiencies with respect to those intangible assets.

In addition, legacy tax-efficient structures such as cost sharing arrangements (CSAs) and advanced pricing agreements (APAs) may no longer be fit for purpose. And in some cases, we have found may result in enhanced tax audit risk or an unnecessarily high effective tax rate because of how they treated (or failed to consider appropriately) digital value drivers.

KPMG has worked with many companies to deploy novel tax structures to accommodate new digital operating models and capture the value of digital assets to drive bottom line profits. Below we explore some of the ways in which we are helping clients do just that.

New strategies to enhance bottom line results

Starting at the Start—analyzing your value chain

Most businesses have not started or have only just begun to assess the implications of digital transformation for their transfer pricing models and tax structures. Many businesses have significant risk embedded in their current tax operating models around digital, and much of that risk currently remains unknown to them. And a few early movers are already ahead of the pack having focused on identifying and
understanding how digital transformation affects their end-to-end value chain and engaging affirmatively to capture significant benefits by aligning their tax structure to the new digital value drivers within their organizations.

Traditionally, transfer pricing policies have attributed most of the residual profit for intangible property (IP) in the business to the legal or economic IP owner, even where key functions, such as IT, R&D or other intangible creating expenses are incurred, or functions performed, elsewhere in the group. As a result of BEPS\(^3\), the OECD guidelines on intangibles significantly changed the tax landscape, requiring that intangible related returns are allocated to entities in large part by reference to which individuals are performing “DEMPE\(^4\)” functions and controlling risks. In addition, a company must be able to demonstrate that its taxable profit and the location of DEMPE functions are aligned.

In order to effectively implement any new value chain strategy in line with the new tax rules and regulations, an organization must first have a clear view of the existing value drivers within its business. Value Chain Analysis (VCA) is a tool to visualize and assess the relative value of a company’s value chain. When done correctly, a VCA should help to identify where digital assets are being deployed, where data and digitalization are enabling traditional functions, and where new, digitally focused risks impact the business and drive value. The KPMG VCA process is designed to assist companies identify value drivers by applying a systematic approach to distinguish the people, assets, processes, and procedures deployed by an organization and the role each plays in creating value. The VCA allows tax departments to start to assess the implications of digital transformation on the company’s tax structure (e.g., analyze substance in the company) in order to draw conclusions for tax and transfer pricing purposes.

In addition to reviewing an enterprise-wide value chain, limited scope VCAs can be customized to look at a specific business unit/division, a specific function, or even a specific process in order to capture and evaluate the specific value drivers within each. It is a flexible tool designed to empower the company’s leaders to make informed decisions.

How to do a VCA

1. Map
   - High level industry analysis
   - Develop initial Activity Map and value driver review
   - Conduct interviews

2. Evaluate
   - 1. Prepare Activity Map
     Capturing activities across value chain
   - 2. Identify and map assets and risks
     Identifying assets, risks and synergies, map to activities
   - 4. Value hypothesis
     Evaluate and assess relative contributions of different value drivers
   - 5. Prepare value-weighted asset and risk map
     Identify relative importance of assets and risks
   - 6. Prepare value heat map

3. Apply
   - 7. Overlay entity perspective
     Match activities to entity/location
   - Identify gaps/risks in the current pricing arrangements—Assess whether profit outcome is aligned to value creation.
   - Identify activities within the value chain that require a detailed review of current pricing mechanism.
   - Plan next steps.

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\(^3\) The Organisation for Economic Co-operation and Development (OECD), one of the largest non-governmental agencies (NGO) began a global project to develop a global framework to combat tax avoidance by multinational businesses. This project is called the OECD G20 Base Erosion and Profit Shifting Project (or “BEPS Project” or “BEPS”) and began in 2013 with its first BEPS report issued in 2015, and activity continuing today.

\(^4\) As part of Action Items 8 to 10 of the BEPS Project, it was established that in order for a legal or economic owner of intangible property to earn the non-routine returns associated with that intangible property (in the context of allocating profits within a multinational enterprise) the legal or economic owner of the intangibles must engage in certain development, enhancement, maintenance, protection and exploitation (DEMPE) activities with respect to the intangible property. This rule was a significant change for many companies that had previously allocated significant amounts of profit to intangible property based on ownership and contracts rather than functions such as DEMPE.
In the case of digital transformation, a VCA would enable the tax department to identify the new value drivers and more effectively structure the tax and transfer pricing model around those.

Completion of the VCA is an incredibly powerful tool in its own right. It is useful for refining the company’s transfer pricing model (especially where the transfer pricing model has not kept pace with the organization and substantial misalignment exists between the economics, operations, and tax structure), defending against tax audits, and identify information gaps in the current state structure.

Examples of how digital transformation shifts value driver mix
This shift in digital value can be seen across industries. If, for example, the pricing activity which occurs within the procurement function historically drove $100 of profit for a company, but today the human functions are enhanced by data and digital technology, that $100 of profit is no longer attributed wholly to the pricing team, but also to the digital assets that enabled the activity. If the digital enablement accounts for 40% of the value and the functions, assets, and risks for those digital assets are owned elsewhere, one would expect the profit to reflect this shift.

As a result of digital transformation, we see this shift in the mix of value drivers occurring across all industries. In the past, the value in tractors and heavy industrial equipment was found largely in the product design, the steel and rubber, but now technology, connectivity, the ability to gather and utilize soil, and air data to determine which part of the field to water or to treat with pesticides drives an increasing portion of the value. Alternatively, consider that nearly every function within an insurance company today is either digitalized or digitally-enabled. As such, a portion of value—and from a tax perspective, profit—of every one of those functions is now allocable to one or more digital assets or functions. And, insurance is not unique in this regard.

In the case of many medical device companies, product and process (‘know how’) intangibles are in an offshore location that nominally possesses an appropriate DEMPE profile to allow the offshore entity to earn the non-routine profits derived from the product sale’s end-to-end value chain. These companies typically have a plethora of “white coats” - chief medical officers, cell biologists, pharmacologists, - sitting in offices in places like Ireland, Switzerland, or Singapore, supported by reams of documentary evidence of what they do, the governance to support real, local DEMPE substance and controls to make sure nothing goes “off the rails.” However, there are no “black t-shirts” – the technology folks that support DEMPE for the digital intangibles that create an increasingly large portion of the overall product profit. This is a common blind-spot as the tax personnel in house think of their company as a life science company, not a tech company. This leaves a significant open question for these companies as to how secure their DEMPE profiles are today? Tomorrow?

Tax structures for a digital operating model
Completion of the VCA also empowers the company to engage in planning opportunities for the future state. The following is an example illustrating just one common planning strategy that many companies are engaging in which aligns tax to their business:
**Digital Center of Excellence (DCOE)**

The DCOE is an operating unit built around software development for internal use or for customer sale (e.g., IoT, software as a service, platform as a service, traditional software sales, software embedded in a product like a car or med device) that can create an agile, cutting edge offering, distinguishing the business and providing significant financial benefits. For example, companies (in industries that include industrial manufacturing, transportation, retail, life sciences, chemicals, etc.) leverage internal use software in all aspects of their business from portfolio management to product design, procurement, supply chain management, finance and on through to customer delivery—often accounting for significant components of value. Many such companies have used a DCOE in order to solve a variety of business challenges. Some of the more common ones include alignment to strategy, maintaining quality, and establishing enhanced visibility and control in an agile development environment. In addition to the operational benefits, such companies have been able to align these models with finance in a way that reduces tax on U.S. and foreign profits from their “traditional” business. In fact, from a tax perspective, for many companies this is one of the best ways to reduce tax on their U.S. profits in a way that is sustainable because it is aligned with the business.

**Digital Center of Excellence**

Larger digital asset development teams
- May sit with the DCOE or anywhere in the world
- Provides overall asset development services
- Provides components (largely around execution) on digital strategy

DCOE personnel
- Manages strategy, budgets and decision making related to digital asset development
- Manages certain functions, assets and risks associated “how” risks associated with the digital strategy are identified, mitigated, and managed
- Manage internal assets and functions as well as third party stakeholders

Local operating entities
- Day-to-Day business “uses” digital assets

Third party assets, services, etc.
How a VCA Supports DCOE Planning

Consider how modern development has changed. Most companies today utilize some form of Agile or other modern development methodology for software development. In its simplest form, the Agile methodology is an iterative process focused on communication, collaboration, and continuous feedback. Unlike traditional “waterfall” development, it is marked by smaller but more rapid releases. The intended benefits achieved by utilization of the methodology include greater flexibility, generally less time taken to develop the products or solutions, and a higher success rate for successful product in the market.

In the “Activity Map” stage of the VCA for a company using an Agile model we review the full spectrum of the software development cycle and understand the key functions which are mapped as activities. Mapping the functions, assets, and risk within each part of the development cycle, one can identify: requirements and resources needed to perform the functions; the asset intensity and the risks involved in the development stages; and the relative value of one process in the software development cycle versus another. This knowledge contributes to a value heat map showing a value rating of high, medium, or low for each of the activities, while also overlaying or “tagging” the relevant legal entity, asset, and geographic view of the value creation.

This VCA heat map output becomes one of the key tools that provide visibility and facilitates business decisions regarding how a company can build a more effective digital operating model using a digital COE. Further, it will allow for the design of a transfer pricing model that is in line with the local country transfer pricing regulations and/or guidelines and ensure that the profit outcomes within a company align with the value creation.

Example of a VCA Heat Map

<table>
<thead>
<tr>
<th>Strategy</th>
<th>R&amp;D and IP</th>
<th>Procurement and supply chain management</th>
<th>Manufacturing</th>
<th>Brand management</th>
<th>Distribution</th>
<th>Management services</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Develop the long term global strategic plans and initiatives</td>
<td>2.1 Identify products and service opportunities for innovation</td>
<td>3.1 Assessing business requirements</td>
<td>4.1 Product range selection</td>
<td>5.1 Brand marketing strategy</td>
<td>6.1 Define and develop distribution/sales and marketing channels</td>
<td>7.1 Finance and treasury services</td>
</tr>
<tr>
<td>1.2 Develop the medium to short term global strategic plans</td>
<td>2.2 Develop and manage the R&amp;D pipeline and strategy</td>
<td>3.2 Sourcing strategy</td>
<td>4.2 Sourcing of raw materials</td>
<td>5.2 Determine brand positioning and vision</td>
<td>6.2 Develop and manage global marketing strategy and budget</td>
<td>7.2 Human resources services</td>
</tr>
<tr>
<td>1.3 Develop the local/regional strategic plans</td>
<td>2.3 Manage and control the R&amp;D budget</td>
<td>3.3 Supplier selection/ Negotiation and contracts</td>
<td>4.3 Overseeing the manufacturing function</td>
<td>5.3 Develop brand guidelines and best practice</td>
<td>6.3 Develop sales strategy for local markets</td>
<td>7.3 Legal and Tax services</td>
</tr>
<tr>
<td>1.4 Execution of strategic initiatives</td>
<td>2.4 Developing product and service designs</td>
<td>3.4 Post contract and supplier relationship management</td>
<td>4.4 Production scheduling and managing production assets</td>
<td>5.4 Manage the legal and regulatory aspects of brands</td>
<td>6.4 Negotiate and execute sales contracts with customers</td>
<td>7.4 IT services</td>
</tr>
<tr>
<td>1.5 Monitor the regional strategic initiatives being undertaken</td>
<td>2.5 IP Protection (legal aspects)</td>
<td>3.5 Quality control and Assurance</td>
<td>4.5 Quality control</td>
<td>5.5 Regional marketing framework</td>
<td>6.5 Manage after sales service (global and regional)</td>
<td>7.5 General administrative services</td>
</tr>
<tr>
<td>1.6 Integration of R&amp;D with existing product/service offerings</td>
<td>2.6 Logistics and delivery</td>
<td>3.6 Assembly and packaging</td>
<td>4.6 Develop and handle corporate communications</td>
<td>5.6 Develop client service experience</td>
<td>7.6 Develop and maintain relationships with customers</td>
<td></td>
</tr>
<tr>
<td>2.7 Monitor and manage governing regulations</td>
<td>2.7 Demand planning and forecasting</td>
<td>3.7 Monitoring of stock</td>
<td>4.7 Managing stock</td>
<td>5.7 Develop framework for product pricing decisions</td>
<td>6.8 Perform customer insight and competitor analysis</td>
<td></td>
</tr>
<tr>
<td>2.8 Manage IP related to technology</td>
<td>2.8 Warehouse stock</td>
<td>3.8 Managing stock</td>
<td>4.8 Managing stock</td>
<td>5.8 Develop framework for product pricing decisions</td>
<td>6.9 Perform customer insight and competitor analysis</td>
<td></td>
</tr>
<tr>
<td>2.9 Train the staff on new product developments</td>
<td>2.9 Monitoring of stock</td>
<td>3.9 Monitoring of stock</td>
<td>4.9 Monitoring of stock</td>
<td>5.9 Developing relationships with third party distribution channel</td>
<td>6.10 Maintain relationships with third party distribution channel</td>
<td></td>
</tr>
</tbody>
</table>

Key
- High value
- Medium value
- Low value
- Assets
- Risks controlled

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Conclusion
Far from the barren land depicted in those early visions of a digital future, business has found the digital world to be a land of abundant, and in fact overwhelming, data. The tools and processes used to harvest, analyze, and exploit this data are yielding incredible new results which is driving profits for those businesses that successfully deploy such tools. The increasing pace of change and disruption portends only more risks and opportunities for organizations. As they navigate this environment, it is critical that tax and finance leaders increasingly integrate their planning with the new operational realities for their businesses. Tax authorities, out of necessity, are increasingly focused on value chains and parsing high value activities and assets from those with low value. Organizations must better understand their own value chain in order to proactively design and implement robust structures for the 21st century.

KPMG is assisting companies to both understand their current state as well as plan for their future state. As we consider the technologies at play, it is clear that the future state is closer than many realize. Tax and finance executives should address these matters today to ensure proper alignment of the tax model with their organizations’ current and future state value chain. A simple place to start is to ask:

1. Do I know how my organization is utilizing and/or developing digital technologies today?
2. Do I know who owns those digital assets within the organization and how affiliates are compensating the owner of such digital assets?
3. In my company’s digital transformation journey, do I know what the intended future state looks like?

KPMG can assist your organization to consider these questions and to build the tax and transfer pricing structures that will protect value in your organization. Please contact the authors for more information.
Contact us

Paul Glunt
Principal, Value Chain Management
T: 949-381-8434
E: gpaulglunt@kpmg.com

Jerry Thompson
Principal, International Tax, Value Chain Management
T: 714-721-3691
E: jerrythompson@kpmg.com

Pravin Ugalat
Principal, Transfer Pricing, Economic & Valuation Services
T: 949-874-3549
E: pugalat@kpmg.com

Matt McNeill
Managing Director, International Tax, Value Chain Management
T: 949-431-7354
E: mgmcneill@kpmg.com

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