

Developing A Digital Transformation Action Plan

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An Article describing the ongoing digital transformation of organizations in traditional industries and the important role played by in-house law departments in driving their organizations' digital transformations. This Article includes a description of the digital transformation trend, major implications of digital transformations for companies in traditional industries, and guidance to help in-house lawyers create and follow a digital transformation action plan.

Many organizations in traditional industries are reinventing their products, services, and business models to incorporate or use advanced technologies, like machine learning, in much more fundamental ways. Companies in industries that traditionally have used technology only to support their internal operations and on-line customer platforms, including energy, financial services, healthcare, transportation, real estate, and hospitality, are repositioning their products and services as technology products and services. For example:

- Automobile original equipment manufacturers (OEMs) are bringing autonomous vehicles and app-based mobility services to market.
- Healthcare providers are promising greater wellness, prevention, and early disease detection through continuous patient monitoring, coaching, and treatment.
- Real estate developers and urban planners are building smart homes and cities.

This trend, often called digital transformation, has major implications for these companies' in-house law departments. This Article explains the digital transformation trend, identifies some major implications of digital transformation for companies in traditional industries,

and provides guidance to help in-house lawyers create and follow a digital transformation action plan.

A proactive corporate law department should drive its organization's digital transformation, rather than just adapt to it. To drive digital transformation, a law department must:

- Understand:
 - the forces propelling its company's digital transformation; and
 - the company's strategy for harnessing those forces of change.
- Assemble a legal team with the right types of technology industry experience and other expertise to help drive the strategy.
- Develop and implement the digital transformation action plan.

While a law department can use this Article to inform its legal support for its organization's digital transformation, this Article is not exhaustive and may not address issues that are specific to every law department's organization. Therefore, each law department should review its organization's commercial and legal circumstances to determine if:

- Specific issues, concerns, or considerations apply.
- It should take additional or different actions to address the organization's needs.

UNDERSTAND THE FORCES OF CHANGE

Digital transformation of traditional industries has been catalyzed, in part, by startup and established technology companies that are reinventing a wide variety of products and services. Digital transformation is:

- Making these products and services more:
 - affordable;
 - connected;
 - convenient;
 - enjoyable;
 - safe; and
 - useful.
- Opening huge new markets for these reinvented products and services and the technology companies developing them.

Technology-driven disruption is putting enormous pressure on established players in traditional industries. Disruptive effects of this trend include:

- Prominent bankruptcies, fire sales, and business closures.
- Split-ups, spin-offs, and preparations for similar potential transactions.
- Forward-thinking and strategic combinations of new and old companies.

Moreover, this technology-driven industry convergence trend is likely to accelerate and intensify over the coming years, supported by:

- Emerging platform technologies, including:
 - artificial intelligence (AI);
 - big data;
 - blockchain;
 - elastic cloud computing; and
 - virtual and augmented reality.
- Fast and ubiquitous 5G connectivity and increasingly powerful, energy efficient, and miniaturized computer chips.

These developments are propelling a wave of product and service innovations. While it is too early to predict winners and losers, one quality the winners are likely to share is their success at integrating specialized types of expertise and talent from domains once considered to have little to do with one another.

UNDERSTAND THE DIGITAL TRANSFORMATION STRATEGY

The digital transformation strategies that in-house law departments must support differ, and some strategies are more ambitious than others. For example:

- Some automobile OEMs are opting for deep partnerships with the major technology companies that are developing autonomous vehicle platforms, while others are seeking greater independence from the large technology developers by designing or acquiring their own platforms.
- Some manufacturers of tangible products, from toys to refrigerators to operating tables, are looking to generate revenue from proprietary, software-enabled services linked to those products.
- Other companies are deemphasizing service revenue by designing their products to interoperate with a range of third-party services, preferring to focus on what they presently know best and believing that their customers want to choose among digital service providers.

DIGITAL TRANSFORMATION PATTERNS

Despite these differences, digital transformation is likely to occur in fairly predictable patterns across traditional industries and among the diverse players within each of them. These include:

- **Software-enabled products and services.** Most products on the market are already software-enabled, even if their features are as basic as a mini-LED panel that displays settings and allows the user to program the device. Although cars are not commonly considered rolling computers, this description of them has long been apt. From smart home products to the components of smart electrical grids to smart city infrastructures, tangible products

are increasingly defined by their software-enabled features and the online services accessible through them. These features and services will be constantly updated and tailored to user characteristics and requirements, doing what they do with little or no conscious effort by users.

- **Always-connected products and the Internet of Things (IoT).** An ever-expanding IoT is being assembled by combining existing networks and technologies with industry developments such as:
 - emerging 5G wireless standards;
 - ever smaller and more powerful microprocessors;
 - new sensor technologies; and
 - elastic cloud computing.
- The already-emerging IoT takes the internet's current functionality and adds to it communication and data sharing not only among humans, but also among a growing number of sensors, controllers, and other devices.
- **Power and value in data.** An increasing volume of ever more granular and real-time data is being generated, captured, and available for analysis and action within the ecosystem of connected organizations, individuals, machines, and objects. These data are immensely valuable and they present in-house law departments with serious challenges because they must be:
 - secured;
 - analyzed;
 - used responsibly; and
 - handled in accordance with an evolving complex of data privacy and security laws across jurisdictions.
- **Machine learning and AI.** Although the introduction of general AI, often referred to as "strong AI," remains elusive and speculative, existing and emerging approaches to "weak AI" are becoming increasingly powerful and pervasive. AI algorithms already influence how consumers shop, select movies, obtain loans, and receive healthcare. These algorithms get better as they process more and higher-quality data, and continual digital transformation increasingly will supply these data. However, these data must be thoughtfully gathered and curated to avoid errors and biases that can produce bad results, such as racial discrimination in loan processing.
- **Automation.** Everything that can be automated increasingly will be automated, from the delivery of packages and pizzas to warfare. A recent report by McKinsey & Company on the future of work in the U.S. predicts that:
 - automation will lead to net positive job growth;
 - the jobs of the future are likely to be higher skilled, such as data scientists, and concentrated in a small number of urban areas; and
 - lower-skilled jobs and work in rural areas will continue to decline.

ASSEMBLE THE LEGAL TEAM

Each in-house law department must understand how its company is embracing the elements of the digital transformation trend in order to assemble the right team and develop a plan for advancing its company's digital transformation strategy. Just as a company's digital transformation strategy requires diverse types of engineering,

product development, and marketing expertise, a broad range of legal expertise also may be required. For example:

- Companies offering technology-supported insurance products and services (also known as InsurTech) must develop and market those products and services with guidance from an integrated team of lawyers who understand:
 - insurance regulations;
 - consumer protection standards;
 - data strategy, security, and privacy; and
 - intellectual property (IP).
- Companies participating in public-private partnerships to bring autonomous vehicles or smart city infrastructure to urban environments may require the help of teams of attorneys possessing expertise in areas such as:
 - telecommunications regulations;
 - environmental law;
 - real estate law;
 - transportation regulations;
 - corporate law;
 - joint ventures;
 - public finance;
 - tax law;
 - IP law;
 - data law; and
 - administrative law.

Few in-house law departments within technology companies or companies in traditional industries presently have the broad range of expertise needed to support their companies' digital transformation strategies. In addition, only a small subset of large law firms have such broad and deep cross-industry expertise. Many firms that are predominantly aligned with the technology industry, most of which are based on the West Coast, lack deep expertise in traditional industries and the practice areas most relevant to them. Only a handful of larger, national firms currently have the balanced strength in multiple industries, including technology, that is necessary in the digital transformation era.

Many general counsel and other law department leaders, including senior legal operations professionals, must dramatically expand the scope of expertise and services their departments provide to support their companies' digital transformation business strategies. This may require a complete transformation of their departments, depending on their departments' levels of expertise and their companies' ambitions and plans. Many law departments already have attorneys with the required expertise, including:

- Patent prosecutors and litigators.
- Experts in heavily regulated areas such as:
 - communications; and
 - export control.
- Data security and privacy lawyers.
- Compensation and benefits specialists with extensive experience creating and maintaining the types of equity incentive programs common in the technology industry.

- Corporate and M&A lawyers with venture capital and startup company expertise.

Law departments that do not yet have these types of specialists may need them, and those departments that already have them may eventually need more. Practices and disciplines that are standard in technology industry law departments, such as forward-patenting sessions and tight control over trade secrets, will become even more common. For more information on developing in-house counsel skills, see Practice Notes, In-House Attorney Development ([W-018-2934](#)) and In-House Counsel Skills to Support Emerging Law Department Responsibilities ([W-018-8798](#)).

The right balance between building internal capacity and reliance on outside counsel will vary from company to company. However, whatever the right mix is for a particular company, tight integration and effective collaboration among diverse internal and external specialists, many of whom have little history of working together, will be essential. For more information on working effectively with outside counsel, see Working Effectively with Outside Counsel Checklist ([7-617-8668](#)).

DEVELOP AND IMPLEMENT A DIGITAL TRANSFORMATION ACTION PLAN

An in-house law department must thoughtfully develop its action plan by identifying, analyzing, and accounting for the impact of its organization's digital transformation on the organization's:

- Business model (see Identify the Plan's Implications for the Organization's Business Model).
- Products and services (see Understand the Plan's Impact on Products and Services).
- Marketing, sales, and fulfillment activities (see Determine the Plan's Effect on Marketing, Sales, and Fulfillment).
- Exposure to risk (see Identify the Plan's Risks).
- Internal operations (see Account for the Plan's Impact on the Organization's Internal Operations).

IDENTIFY THE PLAN'S IMPLICATIONS FOR THE ORGANIZATION'S BUSINESS MODEL

In-house counsel should identify and plan for the digital transformation's effects on the organization's business model by taking the following steps:

- Conducting an appropriately broad survey of laws and regulations applicable to the new business model.
- Ascertaining how the new business model is affected by existing laws and regulations. This includes whether the new business model:
 - complies with those laws and regulations, in which case in-house counsel may want to work to support the maintenance of those laws and regulations; or
 - conflicts with those laws and regulations, in which case in-house counsel should suggest revising the products, services, or business model in development to remove the conflict or work to change the laws and regulations to eliminate or mitigate the conflict.

- Identifying whether and how the business model change affects the organization's revenue model and developing a revised contracting structure, including:
 - licensing;
 - subscription services; and
 - service levels.
- Determining whether the organization's existing products and services are incorporated in or displaced by software-enabled features and capabilities. If the new business model displaces existing products and services, in-house counsel should:
 - identify the resulting legal issues such as potential customer claims based on the organization's inability to support or repair legacy products; and
 - develop a strategy to address them.

UNDERSTAND THE PLAN'S IMPACT ON PRODUCTS AND SERVICES

If the organization's digital transformation produces valuable datasets or original technological innovations like software, hardware, or processes, in-house counsel should take steps to protect these assets and maximize their value by:

- Identifying and implementing the appropriate forms of IP and data protection, including:
 - patents;
 - trademarks;
 - copyrights; and
 - trade secrets.
- Establishing programs to encourage early identification of inventions, such as:
 - forward-patenting sessions; and
 - patent disclosure bonuses.
- Conducting offensive and defensive surveys of the IP landscape applicable to the organization's technological developments to identify potentially competing IP.
- Developing and following a comprehensive IP portfolio development and protection strategy.

If the organization outsources development or production of new software or hardware, in-house counsel should carefully document the distribution of IP rights among the participating parties if:

- The parties will jointly develop the software or hardware.
- The software or hardware is critical to the organization's digital transformation plan and is not easily replaced.

If the organization's new products or services incorporate, integrate with, or are dependent on third-party hardware components, software components, or data, in-house counsel should:

- Ensure that the terms governing the use of those components or data are consistent with the organization's business and legal needs in areas such as:
 - IP rights;
 - continuity of supply or service;
 - service level commitments;
 - assignment restrictions;

- representations;
- warranties; and
- indemnities.

- Develop, publicize, and audit compliance with policies and systems for approving and managing the use of open-source software and for approving and tracking alteration of third-party components and licensed data, including combinations with the organization's developments and data.
- Evaluate and address dependencies on third-party application programming interfaces (APIs) and terms of use.

In-house counsel should examine whether the organization intends to house its data using its own cloud infrastructure, a third-party cloud service provider, or a combination of the two. To ensure that the organization's data is adequately protected, in-house counsel should:

- Assess and address the organization's network, data security, and privacy issues.
- Review and update the organization's privacy policies and practices, terms of service, and other related agreements.
- Evaluate and negotiate appropriate third-party terms of service.

If the organization's new products and services depend on dedicated access to third-party communication networks, in-house counsel should:

- Secure the necessary regional and global network access agreements.
- Consider procurement and integration of required communications hardware modules with bundled network access contracts.

In-house counsel should address any cross-border impacts arising from hardware, software, or data traveling through or residing in new countries by identifying and accounting for:

- International trade regulatory issues like export controls on encryption technology.
- Foreign legal and regulatory implications like the General Data Protection Regulation (GDPR) and International Organization for Standardization (ISO) requirements regarding accessibility, recycling, and testing.

If AI technologies are used in the organization's internal operations, products, or services, in-house counsel should:

- Assess AI systems such as algorithms and datasets for risks including:
 - bias;
 - torts;
 - data security; and
 - data privacy.
- In-house counsel should then take mitigation measures to address any risks they identify.
- Develop, implement, and enforce policies and protocols for the responsible use of AI.
- Track emerging legal, regulatory, and industry developments that may affect the organization's use of AI technology.

If the organization's products and services connect to and function with the IoT, in-house counsel should:

- Evaluate and address the associated impacts on data:
 - strategy;
 - security; and
 - privacy.
- Consider and plan for the issues presented by the interaction among products, services, and components emanating from multiple sources, including:
 - licensing; and
 - liability.

DETERMINE THE PLAN'S EFFECT ON MARKETING, SALES, AND FULFILLMENT

The law department should determine whether and how the organization's digital transformation affects its marketing and sales strategies. If the organization uses channel partners to market and sell its products and services, in-house counsel should develop or revise the promotional materials and agreements the organization uses with its partners, joint marketers, and resellers to reflect applicable technology industry-oriented issues, including:

- IP rights.
- Licensing.
- Representations.
- Warranties.
- Indemnities.
- Data privacy.
- Data security.

Regardless of whether the organization delivers its products and services using its own resources or the resources of a third party, in-house counsel should also examine and plan to address the consequences of adding new modes of delivery like drones, autonomous vehicles, or robots, including:

- Regulatory approvals and compliance.
- Safety.
- Liability.
- Privacy.
- Procurement.

IDENTIFY THE PLAN'S RISKS

In-house counsel must identify and address any new risks that emerge from the organization's digital transformation, including:

- **Cyber-security.** In-house counsel should conduct a risk-assessment to determine whether the digital transformation creates new or different cyber-security risks and develop and implement mitigation strategies, including:
 - incorporating provisions in the organization's contracts with its suppliers that require them to implement appropriate levels of cyber-security; and
 - recommending that the organization obtain cyber-risk insurance.
- **Products liability.** In-house counsel should determine whether the digital transformation exposes the organization to new or different product liability risks such as:

- risk of bias or error from increased reliance on AI;
- tort risk associated with autonomous transportation or delivery; and
- risk allocation within a multivendor IoT system.
- In-house counsel should then develop and implement safeguards to protect the organization from these risks by:
 - working with the organization's product development and engineering departments and other internal stakeholders to identify and eliminate potential bias issues;
 - revising the organization's sales and service agreements and terms and conditions of sale and service to include warranty disclaimers and limited indemnities; and
 - recommending that the organization purchase products liability insurance.

For more information about risk-management for in-house counsel, see Practice Note, *Aligning In-House Counsel with Company Risk Tolerance* ([W-023-5076](#)).

ACCOUNT FOR THE PLAN'S IMPACT ON THE ORGANIZATION'S INTERNAL OPERATIONS

The organization's digital transformation action may have impacts across the organization's internal operations, departments, and personnel. In-house counsel must identify and plan for those impacts to ensure that they do not adversely affect the success of the organization's digital transformation.

Labor and Employment

In-house counsel specializing in labor and employment issues should determine whether the organization's employment agreements, policies, and practices are suitable for its new business model, direction, and staffing needs. If the organization needs employees with specialized technical skills, in-house counsel should:

- Assess the adequacy of the existing template employment agreements related to the assignment of technical developments.
- Consider the relevance and desirability of customary technology industry restricted covenants such as:
 - non-competition; and
 - non-solicitation.
- For more information on employment-related covenants, see *Restrictive Covenants Toolkit* ([4-523-8981](#)).
- Revise the template employment agreements appropriately. However, in-house counsel should be mindful of state law variations, such as restrictions on non-competition clauses in California and elsewhere, when revising those agreements.
- Research and advise the organization on new and different compensation models that it may need to implement to attract qualified employees, such as stock options and restricted stock units. If the organization adopts an equity incentive plan, in-house counsel should provide guidance on issues related to:
 - corporate law;
 - securities law; and
 - board operations.

The organization's digital transformation may result in layoffs arising from:

- The reconfiguration of the organization's workforce.
- The addition of new capabilities.
- The relocation of operations.
- The incorporation of new technologies such as AI and robots.

In-house counsel should identify and plan for these layoffs and other labor and employment issues including:

- Notification obligations arising under the Worker Adjustment and Retraining Notification Act (WARN Act) and state law equivalents.
- Compliance with federal and state anti-discrimination laws.

For more information on employee terminations, see *Reductions in Force Toolkit* ([1-506-7103](#)).

If the organization intends to use independent contractors, affiliates, or non-traditional third-party participants to operate the new business model, in-house counsel should:

- Identify, analyze, and address "gig economy" labor issues such as the risk of employee misclassification litigation.
- Assess and manage the liability risk of third-party conduct.
- Draft program agreements that align with the organization's view of its roles and responsibilities in the new model.

For more information on independent contractor classification issues, see *Practice Note, Independent Contractor Classification* ([4-503-3970](#)).

Corporate, Tax, and Accounting

The organization's digital transformation action plan may introduce new ways of funding, structuring, and conducting the organization's operations that in-house counsel must be prepared support. For example, if the organization:

- Intends to raise funds to pay for its digital transformation efforts, in-house counsel must advise on equity or debt financing.
- Participates in joint or hybrid business structures, in-house counsel may need to provide legal advice on structures such as public-private partnerships and joint ventures.
- Licenses its IP or software-enabled services to generate revenue, in-house counsel should consider:
 - establishing a domestic or international IP holding company;
 - adopting a tax-efficient international corporate structure;
 - implementing appropriate revenue accounting policies;
 - making the necessary changes to the organization's customer contracts; and
 - revising the organization's Securities and Exchange Commission reporting protocols.
- Purchases emerging technology assets or entities to develop the organization's ecosystem or acquire IP, personnel, or customers, in-house counsel must manage the associated domain-specific norms and issues.
- Issues or participates in the exchange of digital tokens in connection with the new business model, in-house counsel should identify and

evaluate securities law, money transfer, and other issues associated with digital tokens.

Data Strategy, Security, and Privacy

The organization's digital transformation action plan may expose the organization to increased amounts and types of data. If the organization intends to collect, use, share, or monetize its data, in-house counsel should be prepared to provide the necessary legal support, including:

- Identifying and mapping data:
 - types;
 - sources;
 - collection methods;
 - storage;
 - aggregation;
 - manipulation; and
 - uses.
- Conducting initial and ongoing technical audits and stress tests of the organization's information technology (IT) systems to validate the organization's understanding of its data types and flows and to ensure system integrity.
- Developing comprehensive and globally compliant strategies, policies, and programs regarding data:
 - collection;
 - governance;
 - security;
 - privacy;
 - use;
 - monetization; and
 - breaches.
- Advising the organization on its uses of data gathered through emerging technologies such as:
 - facial recognition;
 - biometrics; and
 - location tracking.

For more information on data strategy, security and privacy, see *Privacy and Data Security Toolkit* ([8-500-3810](#)).

Legal

The law department must be prepared to update its operations in response to the digital transformation action plan by:

- Expanding the law department's knowledge management (KM) capabilities by:
 - ensuring that in-house counsel have access to relevant and current information to provide the legal support required by developments in the organization's operations; and
 - providing in-house counsel with relevant continuing legal education (CLE) training by outside law firms and other third parties.

- Identifying and implementing new process improvements, such as those relying on robotics process automation (RPA), by:
 - assigning department members responsibility for identifying appropriate process improvement opportunities;
 - collaborating on solutions with consultants and outside counsel; and
 - working with the organization's IT department or third-party technology vendors to implement the appropriate process improvements.
- For more information on law department technology, see Practice Notes, Using Artificial Intelligence in Law Departments ([W-012-7887](#)), Using Technology to Increase Law Department Efficiency ([W-008-7008](#)), and Designing and Implementing Legal Technology Roadmaps ([W-008-9550](#)).
- Determining the impact of the organization's digital transformation on the organization's selection of outside counsel to support the new business model by confirming that the law department or procurement team has data on outside counsel capabilities, fees, and other relevant market information.

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