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Digital Transformation Action Plans: Guidance for Law Departments

Companies in traditional industries are increasingly undergoing digital transformations and repositioning their offerings as technology products and services. Law departments must understand this trend and develop and implement a digital transformation action plan to effectively support their companies' digital transformations.



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Many companies in traditional industries are reinventing their products, services, and business models to incorporate or use advanced technologies (for example, machine learning) in more fundamental ways. Companies in industries that traditionally have used technology only to support their internal operations and online customer platforms, including energy, financial services, health care, transportation, real estate, and hospitality, are now repositioning their offerings as technology products and services. For example:

- Automobile original equipment manufacturers (OEMs) are bringing autonomous vehicles and app-based mobility services to market.
- Health care 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' law departments. A proactive corporate law department should drive its company's digital transformation, rather than merely adapt to it.

Against this background, this article:

- Provides an overview of the digital transformation trend, including the forces propelling digital transformation.
- Offers guidance for law departments on developing and implementing a digital transformation action plan.

DIGITAL TRANSFORMATION: OVERVIEW

To drive digital transformation, in-house counsel must understand:

- The forces propelling digital transformation.
- The strategies available to companies to take advantage of the digital transformation trend.

FORCES OF CHANGE

Digital transformation of traditional industries has been catalyzed, in part, by startups 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 new markets for these reinvented products and services and the technology companies developing them.

Technology-driven disruption is putting significant pressure on established companies in traditional industries. Disruptive effects of the digital transformation trend include:

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

The 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.



Search [Artificial Intelligence Key Legal Issues: Overview and Using Artificial Intelligence in Law Departments](#) for more on AI.

Search [Blockchain and Distributed Ledger Technology \(DLT\): Overview and Blockchain Basics for In-House Counsel](#) for more on blockchain.

These developments are propelling product and service innovations. Companies that are able to integrate specialized expertise and talent from domains once considered to have little to do with one another will be best positioned to take advantage of the digital transformation trend.

DIGITAL TRANSFORMATION STRATEGIES

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

- Some automobile OEMs are opting for deep partnerships with major technology companies that are developing autonomous vehicle platforms, while others are seeking greater independence from large technology developers by designing or acquiring their own platforms.
- Certain 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 providing their customers with the ability to choose among digital service providers.

Despite these differences, digital transformation is likely to manifest in fairly predictable patterns across traditional industries and among diverse companies. These patterns feature:

- **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 product. 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 continuously updated and tailored to user characteristics and requirements, performing with little or no conscious effort by users.

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.

- **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;
 - smaller and more powerful microprocessors;
 - new sensor technologies; and
 - elastic cloud computing.The IoT uses the internet's current functionality and adds communication and data sharing among humans, as well as a growing number of sensors, controllers, and other devices.
- **Power and value in data.** An increasing volume of granular and real-time data is being generated, captured, and analyzed within the ecosystem of connected organizations, individuals, machines, and

objects. This data is immensely valuable and presents challenges for law departments because it must be:

- secured;
 - analyzed;
 - used responsibly; and
 - handled in accordance with evolving 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 health care. These algorithms improve as they process more and higher-quality data, and continual digital transformation increasingly will supply this data. However, this data must be thoughtfully gathered and curated to avoid errors and biases that can produce negative results (for example, 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 US predicts that:
 - automation will lead to net positive job growth;
 - the jobs of the future are likely to be higher skilled (for example, data scientists) and concentrated in a small number of urban areas; and
 - lower-skilled jobs and work in rural areas will continue to decline.

(See McKinsey & Company, *The Future of Work in America: People and Places, Today and Tomorrow* (July 2019), available at mckinsey.com.)

DIGITAL TRANSFORMATION ACTION PLAN

The law department must thoughtfully develop its digital transformation action plan by identifying, analyzing, and accounting for the impacts of the company's digital transformation. Key steps the law department should take include:

- Assembling an effective legal team.
- Identifying the plan's implications for the company's business model.
- Understanding the plan's impact on products and services.
- Determining the plan's effect on marketing, sales, and fulfillment.
- Evaluating the plan's risks.
- Accounting for the plan's impact on internal operations.

LEGAL TEAM COMPOSITION

The law department must understand how the company is embracing the elements of the digital transformation trend to assemble the right team and develop a digital transformation action plan for advancing the company's 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 (known as InsurTech) must develop and market those products and services with guidance from an integrated team of attorneys who understand:
 - insurance regulations;
 - consumer protection standards;
 - data strategy and privacy and security issues; and
 - intellectual property (IP) law.
- Companies participating in public-private partnerships to bring autonomous vehicles or smart city infrastructure to urban environments may require the assistance 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 privacy and security law; and
 - administrative law.

Few 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.

General counsel and other law department leaders, including senior legal operations professionals, may need to significantly expand the scope of expertise and services their law departments provide to support their companies' digital transformation strategies. This may require a complete overhaul of their departments, depending on current levels of expertise and the 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 privacy and security attorneys.
- 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 attorneys with venture capital and startup company expertise.

Law departments that do not yet have these types of specialists may need them, and those law departments that already have them may eventually be required to hire additional attorneys. 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.



Search [In-House Attorney Development](#) and [In-House Counsel Skills to Support Emerging Law Department Responsibilities](#) for more on developing in-house counsel skills and competencies.

The right balance between building internal capacity and relying on outside counsel will vary from company to company. However, tight integration and effective collaboration among diverse internal and external specialists will be essential (for more information, search [Working Effectively with Outside Counsel Checklist](#) on Practical Law).

IMPLICATIONS FOR THE COMPANY'S BUSINESS MODEL

In-house counsel should identify and plan for a digital transformation's effect on the company's business model by:

- 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 assessing whether the new business model:
 - complies with laws and regulations, in which case in-house counsel may want to advocate for the maintenance of those laws and regulations; or
 - conflicts with laws and regulations, in which case in-house counsel should suggest revising the products, services, or business model in development to remove the conflict, work to change the laws and regulations to eliminate or mitigate the conflict, develop a litigation strategy to contend with disputes that may arise as a result of the conflict, or develop a strategy that employs a combination of these approaches.
- Identifying whether and how the business model change affects the company's revenue model and developing a revised contracting structure, including:
 - licensing;
 - subscription services; and
 - service levels.

- Determining whether the company'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 company's inability to support or repair legacy products; and
 - develop a strategy to address legal issues.

IMPACT ON PRODUCTS AND SERVICES

If the company's digital transformation produces valuable datasets or original technological innovations (such as 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 company's technological developments to identify potentially competing IP.
- Implementing a comprehensive IP portfolio development and protection strategy.

 Search [Intellectual Property Rights: The Key Issues](#) for more on the main categories of IP rights in the US and their management.

If the company outsources development or production of new software or hardware, in-house counsel should carefully document the distribution of IP rights among the participating parties, regardless of whether the third-party developer will develop the software or hardware entirely or whether it will be jointly developed. It is especially important to secure ownership, or at least strong license rights, to developments that are critical to the company's digital transformation or that could not easily be replaced.

If the company'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 company's business and legal needs in areas such as:

- IP rights;
- continuity of supply or service;
- service level commitments;
- assignment restrictions;
- representations and warranties; and
- indemnities.

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

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

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

If the company'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, such as export controls on encryption technology.
- Foreign legal and regulatory implications, such as the General Data Protection Regulation (GDPR) and International Organization for Standardization requirements regarding accessibility, recycling, and testing (for more information, search [GDPR Resources for US Practitioners Toolkit](#) on Practical Law).


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

- Assess AI systems, such as algorithms and datasets, for risks, including:

- bias;
 - torts; and
 - data privacy and security.
- Take steps to mitigate any identified risks.
 - Develop, implement, and enforce policies and protocols for the responsible use of AI.
 - Track emerging legal, regulatory, and industry developments that may affect the company's use of AI.

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


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

 Search [The Internet of Things: Key Legal Issues](#) for more on the benefits and risks of the IoT and IoT privacy and data security regulation under US federal law.

EFFECT ON MARKETING, SALES, AND FULFILLMENT

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

- IP rights.
- Licensing.
- Representations and warranties.
- Indemnities.
- Data privacy and security.

 Search [Advertising and Marketing Toolkit](#) for resources to assist counsel in identifying key legal and business issues when undertaking advertising and marketing activities.

Regardless of whether the company delivers its products and services using its own resources or the resources of a third party, in-house counsel should analyze and address the consequences of adding new modes of delivery (such as drones, autonomous vehicles, or robots), including:

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

- Privacy.
- Procurement.


 Search [Federal Drone Law in US](#) for information on the US federal laws related to government, recreational, and commercial use of drones.

It is especially important to secure ownership, or at least strong license rights, to developments that are critical to the company's digital transformation or that could not easily be replaced.

EVALUATION OF KEY RISKS

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

- **Cybersecurity risks.** In-house counsel should conduct a risk assessment to determine whether the digital transformation creates new or different cybersecurity risks and develop and implement mitigation strategies, including:
 - incorporating provisions in the company's contracts with its suppliers that require them to implement appropriate levels of cybersecurity; and
 - recommending that the company obtain cyber risk insurance (for more information, search [Cyber Insurance: Insuring for Data Breach Risk on Practical Law](#)).
- **Product liability risks.** In-house counsel should determine whether the digital transformation exposes the organization to new or different product liability risks, including:
 - 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.

 Search [Cybersecurity Issues for In-House Counsel](#) for more on key cybersecurity issues, including steps to take when developing and implementing a comprehensive information security program.

Search [Product Liability Claims, Defenses, and Remedies](#) for more on product liability issues.

To protect the company from identified product liability risks, in-house counsel should:

- Work with the company's product development and engineering departments and other internal stakeholders to identify and eliminate potential bias issues.
- Revise the company's sales and service agreements and terms and conditions of sale and service to include warranty disclaimers and limited indemnities.
- Recommend that the company purchase product liability insurance (for more information, search [Maximizing Insurance Coverage for Product Manufacturers](#) on Practical Law).

IMPACT ON THE COMPANY'S INTERNAL OPERATIONS

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

Specifically, the plan may implicate:

- Labor and employment issues.
- Corporate, tax, and accounting considerations.
- Data strategy and privacy and security concerns.
- Law department operations changes.

Labor and Employment Issues

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

- Assess the adequacy of the provisions included in 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 covenants; and
 - non-solicitation covenants.



Search [Restrictive Covenants Toolkit](#) for resources to assist employers in protecting their trade secrets and other proprietary and confidential information and assets.

- Revise the template employment agreements appropriately. However, in-house counsel should be mindful of state law variations, such as restrictions on non-competition provisions in California and other jurisdictions, when revising those agreements.
- Research and advise the company 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 company

adopts an equity incentive plan, in-house counsel should provide guidance on issues related to:

- corporate law;
- securities law;
- the tax implications of equity compensation for employers and employees; and
- board operations.

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

- The reconfiguration of the company'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.



Search [Reductions in Force Toolkit](#) for resources to assist employers in complying with legal requirements when planning and implementing a reduction in force, including plant closings and mass layoffs.

If the company intends to use independent contractors, affiliates, or non-traditional third parties 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 company's view of its roles, and associated responsibilities and risks, in the new model.



Search [Independent Contractor Classification](#) for more on independent contractor classification issues.

Corporate, Tax, and Accounting Considerations

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

- 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 (for more information, search [Public Private Partnerships: Issues and Considerations](#) and [Joint Ventures: Overview](#) on Practical Law).
- Licenses its IP or software-enabled services to generate revenue, in-house counsel should consider:
 - surveying applicable state, federal, and foreign direct and indirect tax regulations, with an eye to identifying possible differences between how existing products and services are taxed and how new products and services will be taxed;
 - adopting a tax-efficient international corporate structure;
 - implementing appropriate revenue accounting policies;
 - making the necessary changes to the company's customer contracts; and
 - revising the company's Securities and Exchange Commission reporting protocols.
- Purchases emerging technology assets or entities to develop the company'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 and Privacy and Security Concerns

The company's digital transformation action plan may require the company to handle increased amounts and types of data. If the company 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 company's information technology (IT) systems to validate the company'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;
- privacy and security;
- use;
- monetization; and
- breaches.
- Advising the company on its uses of data gathered through emerging technologies, such as:
 - facial recognition;
 - biometrics (for more information, search [Biometrics in the Workplace](#) on Practical Law); and
 - location tracking.



Search [Privacy and Data Security Toolkit](#) for resources to assist counsel in creating, implementing, and reviewing a company's privacy and data security compliance programs.

Law Department Changes

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

- Expanding the law department's knowledge management capabilities by:
 - ensuring that in-house counsel have access to relevant and current information to provide the legal support required by developments in the company's operations; and
 - providing in-house counsel with relevant continuing legal education training by outside law firms and other third parties.
- Identifying and implementing new process improvements, such as those relying on robotics process automation, by:
 - assigning law department members responsibility for identifying appropriate process improvement opportunities;
 - collaborating on solutions with consultants and outside counsel; and
 - working with the company's IT department or third-party technology vendors to implement the appropriate process improvements.
- Determining the impact of the company's digital transformation on the company'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.



Search [Using Artificial Intelligence in Law Departments, Using Technology to Increase Law Department Efficiency, and Designing and Implementing Legal Technology Roadmaps](#) for more on law department technology.