

Economy 4.0 – Risk Considerations for a New Era in Communications, Media, and Technology





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INTRODUCTION

The transformation of technology has accelerated in pace. Business models are evolving for the communication, media, and technology (CMT) industry, and companies are looking to take advantage of new opportunities and innovate to keep up with the changes ahead.

Some analysts point to us living in the age of “VUCA” – volatility, uncertainty, complexity, and ambiguity – driven, in part, by CMT innovations. Now, business models are more dynamic and fluid than ever before; this new phase has been dubbed Economy 4.0, also known as the sharing or gig economy. Many of these pioneering models leverage the use of on-demand or contingent talent, online marketplace platforms, big data, and the shifting of asset allocation.

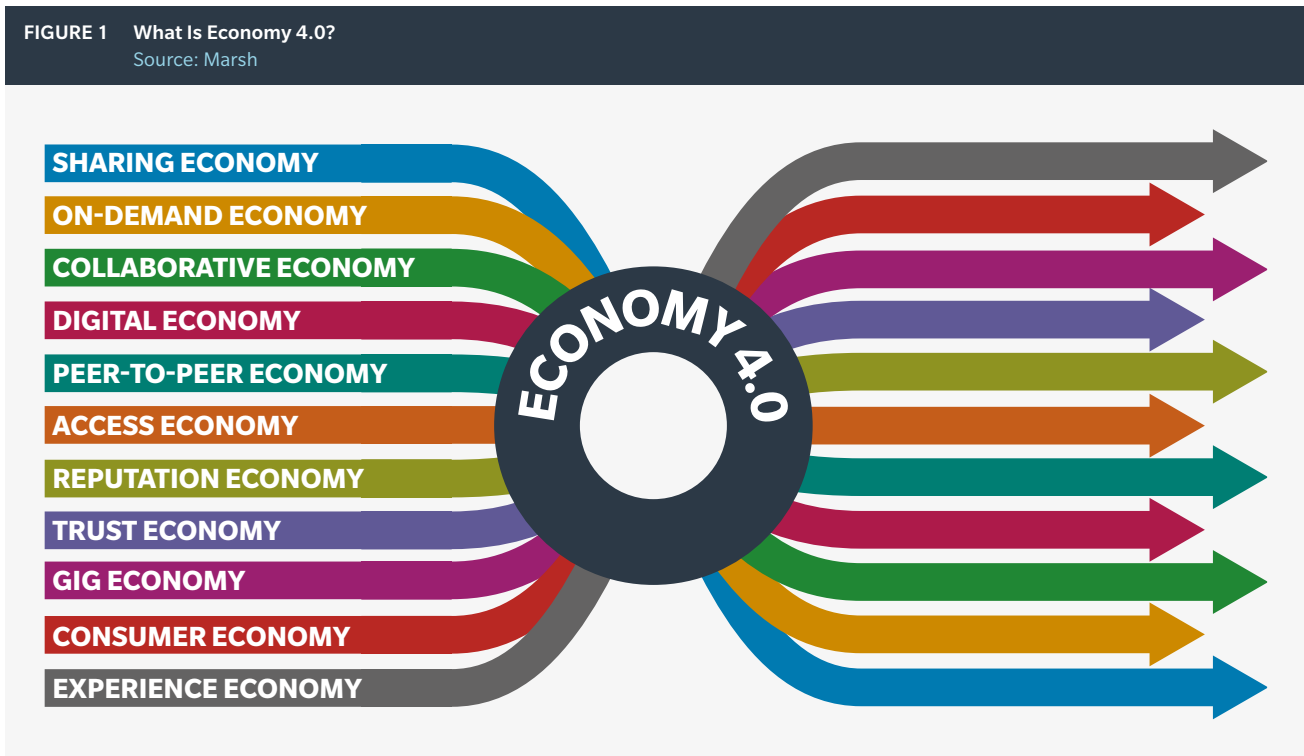
According to our *2018 Communications, Media, and Technology Risk Study*, many CMT companies recognise disruptive technology as an opportunity, with 46% of those surveyed identifying the sharing economy, borne out of disruption, as such. To take advantage of these opportunities, CMT companies that are looking to enter this space need to be aware of the changing risks and challenges.

When exploring new business models, organisations will need to consider how to actively manage the emerging and dynamic risks which result from this new economic and digital era. This paper explores new opportunities for the CMT industry and the areas of risk management these companies should be considering.

UNDERSTANDING ECONOMY 4.0

The changing workplace and new emerging business models have been described in many different ways; however, no definition encompasses all aspects. For this reason, we use the term Economy 4.0 to include all descriptions listed in Figure 1.

FIGURE 1 What Is Economy 4.0?
Source: Marsh



Economy 4.0 is focused on offering consumer-centric experiences, unlocking value to empower end users (businesses and individuals), and maximising underutilised assets (both tangible and intangible) by creating global marketplaces of trust, supported by huge amounts of data. In addition, it connects idle capacity with demand, prioritises access over ownership, offers collaborative forms of consumption, and drives emotional connections to the consumer experience. While Economy 4.0 touches every industry, we specifically see the emergence of the following services in the CMT sector, which is predicted to expand by nearly 1,200% by 2025.¹

¹ PWC. *The Sharing Economy Grows Up*, available at <https://www.pwc.co.uk/issues/megatrends/collisions/sharingeconomy/outlook-for-the-sharing-economy-in-the-uk-2016.html>, accessed 11 April 2018.

FIGURE 2 Opportunities of Economy 4.0
Source: Marsh



Traditional risk analysis, assumptions, management, and mitigation are increasingly losing relevance to many organisations as they become more and more aligned and integrated into Economy 4.0. Companies that do not understand the risks they face could jeopardise their reputations with their customers, and potentially become unable to serve them, while creating and facing a changing risk landscape for themselves.

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FIGURE 3 Economy 4.0 Risks
Source: Marsh

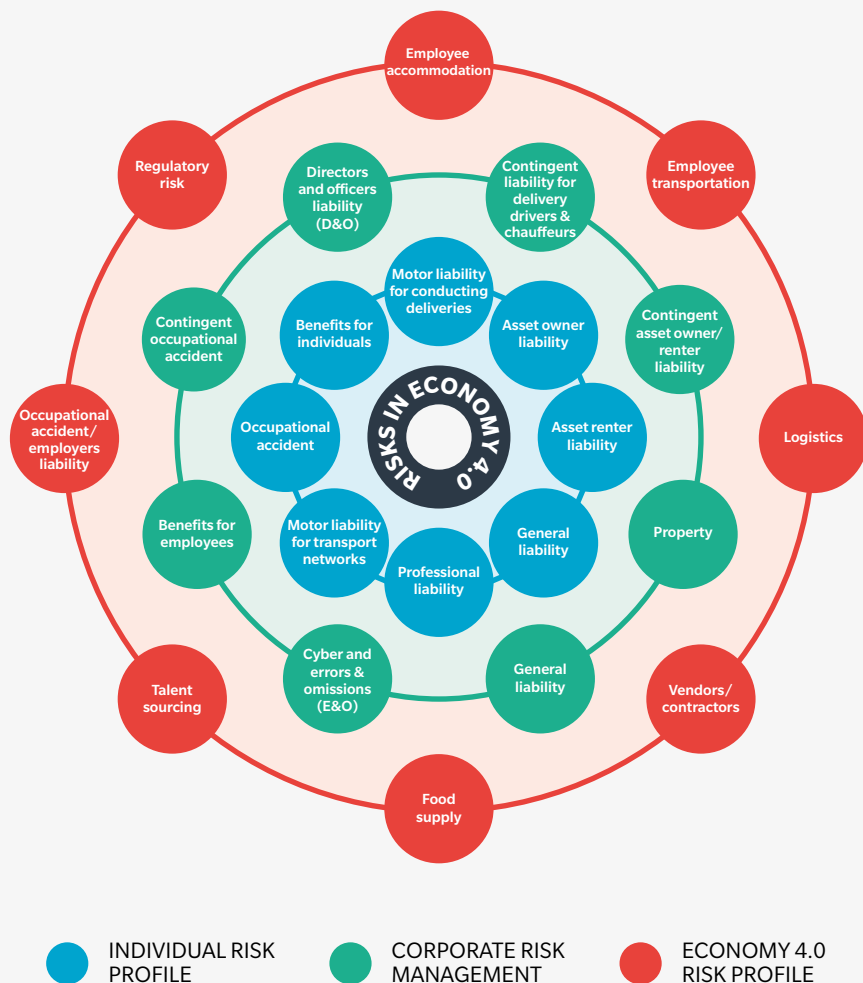


FIGURE 3 DEMONSTRATES HOW THE REALMS OF THE CORPORATE, THE EMPLOYEE, AND EXTERNAL PARTIES ARE MERGING TO CREATE NEW RISKS AND TRANSFORM TRADITIONAL ONES.

HOW ECONOMY 4.0 IS CHANGING THE CMT INDUSTRY'S RISK LANDSCAPE

According to our [2018 Communications, Media, and Technology Risk Study](#), 90% of CMT companies surveyed said sharing economy makes up an aspect of their business, meaning the sector is already becoming ingrained into the opportunities — and risks — that new business models bring.

The CMT sector has embraced new opportunities in this evolving environment. This has included providing infrastructure services (such as cloud computing) for increasingly complex and spread out businesses. In addition, some organisations in the sector are now directly entering industries that they were not traditionally involved in, such as providing deliveries.

Given this new environment, organisations will be faced with different challenges than the past decade has shown — such as the rise of smaller start-up firms that can be more nimble or take a different approach to the regulatory environment. We expect to see incumbents seek to secure their positions via acquisitions of these start-ups and then utilise their broader reach to challenge the established regulatory and legislative frameworks.

One of the key risk and insurance issues with Economy 4.0 is which party owns the risk. If an asset is being used in the company's Economy 4.0 model, but is owned

by the individual providing the services as opposed to the company, it needs to be established where the insurable interest lies. For example, an individual working for a transport network company with a digital platform will generally use their own vehicle, however if they are using this vehicle to carry out services on behalf of the platform, it could be argued that the platform should have responsibility while the individual is driving the vehicle for their business. This would then be considered a first party exposure and may need to be covered under a property or motor policy.

A liability policy can be extended to include a care, custody, and control extension where it “writes-back” cover for employees' personal effects including vehicles and their contents, however there is a grey area here because there is ongoing debate as to whether an individual providing services in Economy 4.0 in an online marketplace is officially an employee or just third party contractor.

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RISKS TO INTANGIBLE ASSETS

The rise of Economy 4.0 has led to us living in an “intangible” age. Today, the world’s largest transportation company owns no cars; the world’s largest media company creates no content; the world’s largest accommodation provider owns no property; and the world’s largest retailer has no stock on its shelves. In 2015, it was estimated that 87% of the value of the Fortune 500 was in intangible assets – up from 17% in 1975, and 68% in 1995.²

The significant majority of a company’s value and risk profile has become intangible in nature. Intangible assets can include intellectual property (IP), trade secrets, data, reputation, and brand value, to name just a few examples.

In our recent *2018 Communications, Media, and Technology Risk Study*, the top-three risks were all intangible and related to new technologies, being:

1. Data security and privacy.
2. Technology errors and omissions.
3. IT resiliency.

Cyber encapsulates numerous intangible risks, mainly relating to the use and distribution of technologies that the business is dependent upon. However, despite these new threats, the majority of respondents to the survey identified new technologies as more of an opportunity than a threat, and 46% of respondents identified the sharing economy as a key opportunity.

DATA SECURITY AND PRIVACY

The General Data Protection Regulation (GDPR) became directly applicable to EU member states in May, it is no surprise that data security and privacy has topped the risk agendas of many in the CMT sector. Under the new regulation, requirements include:

- Explicit consent required to collect sensitive data.
- Direct obligations on data processors.
- New restrictions on the profiling of data subjects.
- Ability to demonstrate and verify compliance.
- Prompt notification of a data breach to data subjects “without undue delay” when the data breach is “likely to result in a high risk to the rights and freedoms of natural persons”.

To add to this, the regulation provides new and enhanced rights for data subjects, including the right to erasure and enhanced subject access rights.

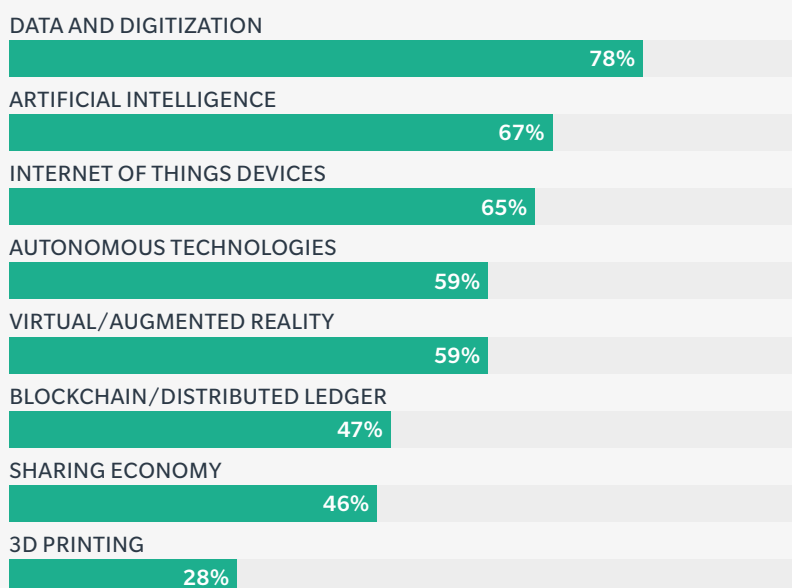
GDPR compliance is a key risk modifier for UK CMT companies’ risk landscapes, and non-compliance could open organisations up to much greater exposures, with those involved in Economy 4.0 needing to pay particularly close attention to what the changes could bring.

IP RISKS

Comprising patents, copyrights, trademarks, and trade secrets, IP is a key driver in business today. Organisations are no longer valued by their tangible assets alone: now business deals and company valuations rely heavily on the ideas these businesses generate and the customers they serve, making these assets critical to business success.

FIGURE 4 Many CMT Companies Recognize Disruptive Technology As An Opportunity
Source: Marsh

DO THESE TECHNOLOGIES REPRESENT A THREAT OR OPPORTUNITY IN THE NEXT 3-5 YEARS? (PERCENT SELECTING OPPORTUNITY)



² Ocean Tomo. *2015 Annual Study of Intangible Asset Market Value*, available at <http://www.oceantomo.com/blog/2015/03-05-ocean-tomo-2015-intangible-asset-market-value/>, accessed 11 April 2018.

Protecting IP and intangible assets has never been more important — and, increasingly, more difficult to achieve.

Furthermore, with the growth of the internet and an exploding market in IP comes an inevitable rise in increasingly complex and expensive litigation, with far-reaching ramifications. As the economic model progresses to the increased use of an on-demand workforce servicing several organisations at the same time — some of which may be competitors — the risk of trade secrets being shared, corporate strategy being divulged, and key documents being removed from the organisational structure increases. In the past, removing a machine containing key algorithms from a company would be extremely difficult. In today's world, a freelance developer can copy and paste key code from one organisation to another in seconds.

In our *2018 Communications, Media, and Technology Risk Study*, 44% of CMT risk professionals identified IP as a key risk facing their business. However, only 23% of respondents felt confident in their risk mitigation of it, suggesting that a much greater understanding is needed under Economy 4.0.

CYBER RISKS

Cyber risk has no globally agreed definition; however, in practice it relates mainly to risks posed by the use of technology and can be linked to sub-categories including data/network privacy, contractual risk and technology errors and omissions, non-damage business interruption (software/network/data), media/content liability, and supply chain disruption.

Economy 4.0 companies have a significant reliance on disruptive technologies and services, including cloud computing and virtualisation, open-source, software/apps, big data, automation, artificial intelligence, and the Internet of Things (IoT). Going forward, the risk exposures relating to these technologies will continue to develop, both in complexity and severity. For example, the use of a connected device could lead to bodily injury through production error, cyber-attack, or through another cause. Understanding how a given risk event may manifest itself through these new technologies will be key to successful mitigation.

How companies go about identifying, classifying, quantifying, and ultimately managing these risks could become critical success factors in their overall business models. Further to this, Economy 4.0 companies will test and challenge traditional approaches to insurance, propel risk management innovation, and drive the need for significantly increased (re)insurance market capacities, particularly concerning intangible related risks.

RISKS TO TRADITIONAL ASSETS

Tangible, traditional assets, including property and equipment will face the same risks as in the past under Economy 4.0, but it is less clear where responsibilities lie, and where these assets fall in terms of insurance policies. Asset owners are finding new and creative ways to monetize their assets by leveraging platforms to make them available and accessible to a broader group of consumers. And the insurance around those assets needs to change now — if property is not being used by its owner, should they still be the party to insure it?

The European Court of Justice said that a service whose purpose was “to connect, by means of a smartphone application and for remuneration, non-professional drivers using their own vehicle with persons who wish to make urban journeys” must be classified as “a service in the field of transport” in EU law, therefore as EU law currently stands, it is for the member states to regulate the conditions under which such services are to be provided. This means that transportation networking companies could be subject to formal regulation in the same way as other transportation companies. This could then dictate their liability which would ultimately clarify who would be responsible in the event a vehicle (or other property owned by an individual but used in the company's sharing economy model) was damaged and how this should be insured. There is the question of who has the insurable interest, such as which party stands to suffer economic loss if the property is damaged or lost? On one hand, this would point towards the owner of the vehicle — they would incur the cost of repairing the vehicle and possibly lose income as a result of being off the road. However, it may be that a platform would also have a limited, lesser interest if they stood to lose revenue as a result of damage or loss of the property/asset.

Insurable interest is more a question of which party is able to insure the asset, whereas the subsidiary question is which party is most appropriate to insure the asset. Generally, the party with the greatest control over the risk should insure that risk. However, contractual arrangements can modify this position and this is still a question to be debated.

The “as-a-service” model dominates Economy 4.0. From “Software as a Service” to “Delivery as a Service”, “Infrastructure as a Service”, “Entertainment as a Service”, and “Travel as a Service”, almost all types of businesses can be offered as a service to customers. This means that businesses do not need to invest heavily upfront; they can rely upon another entity to provide almost all aspects of their value chain at scale and with increased flexibility.

However, the benefits of having scalable solutions can create less control in the supply chain. For example, data is now hosted in third party servers, office space is now controlled and managed by a third party, and the product itself is a service, for instance, providing customer access to streaming music rather than selling them an album.

The disruption of assets has important implications for both providers and users:

PROVIDERS

- If you own the assets, have you taken time to understand and quantify the exposure of your assets at any given point? If you do not own the assets, have you ensured that the asset owner is adequately protected?
- If there is a disruption in your supply of assets, are you liable for the denial of access? What control do you have over re-establishing access to the assets? Do you have an alternative source or an equivalent asset?
- Are you protected if something goes wrong? For example, if you host software and it crashes, what is the ultimate exposure?

USERS

- How can you ensure that there is adequate capacity to scale your business when required?
- If your providers were unavailable for a period of time, how would it affect your business continuity?
- If you upload your data onto the cloud, who has ultimate ownership of that data, and does your risk management programme include protection from third-party errors?
- Have you considered data security risk? For example, is data being encrypted? How do your users/employees access data?

Organisations should undertake a thorough review of their risk management programme with these thoughts in mind. They may find that their exposure to traditional physical hazards such as fire, earthquake, and flood are much diminished. However, their liability exposure may have actually increased due to exposure to complex supply chains, the rise of “renting” assets and processes, and being the provider of services rather than of products.

Business interruption and supply chain losses represent the top concern for businesses around the globe, with average claims 36% higher than direct property claims, according to the *Allianz Risk Barometer 2017*.³ Many traditional business interruption coverages are limited to losses arising from physical damage, which would not be suitable for those businesses employing the “as-a-service” model, particularly for non-tangible services such as web hosting.

Organisations should therefore look to work with partners that understand their complex, international, and expansive supply chains, as well as the range of vulnerabilities they are subject to.

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³ Allianz. *Allianz Risk Barometer 2017*, available at <http://www.agcs.allianz.com/insights/white-papers-and-case-studies/allianz-riskbarometer-2017/>, accessed 11 April 2018.

LIABILITY

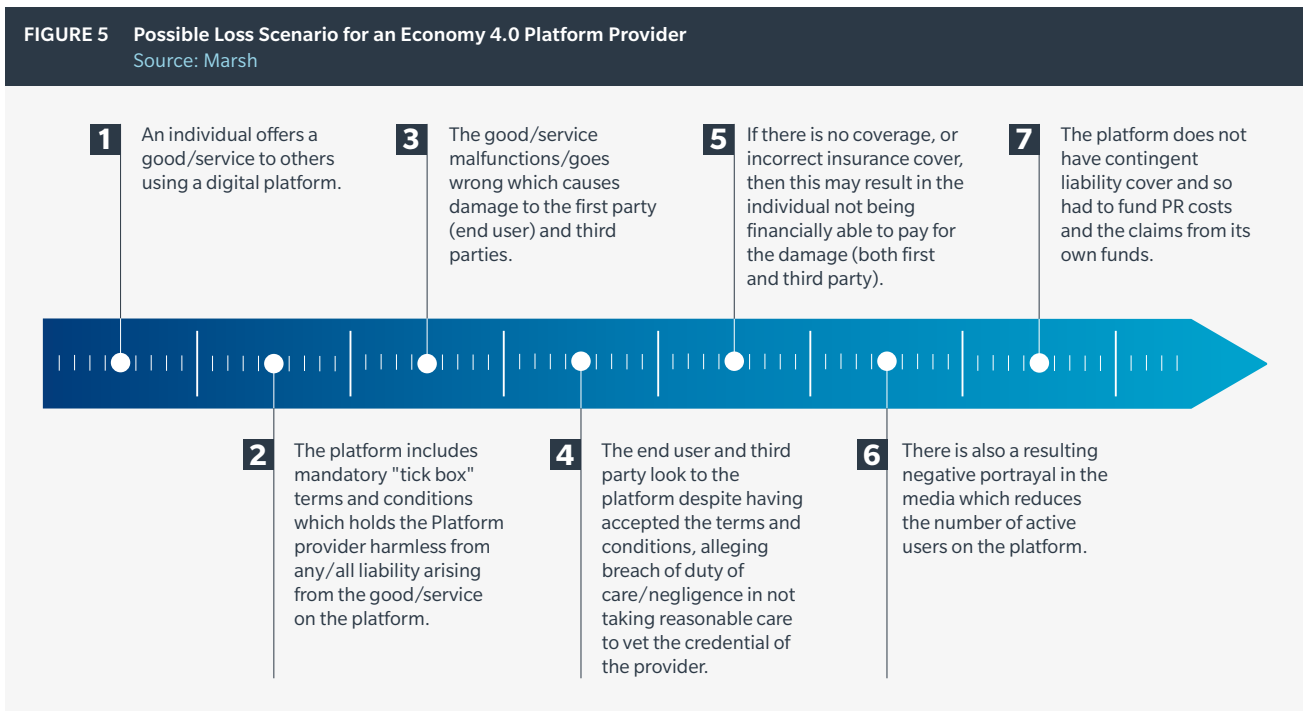
Where does liability end? In Economy 4.0, the answer may not be as clear as it was in the past. There are three elements to understanding the liability of CMT companies with disruptive business models:

- Who is responsible for the actions of workers?
- Who is responsible for assets and services provided through intermediaries?

- Where do the companies’ liabilities for the actions of workers in their service begin and end?

Figure 5 examines some of the issues that need to be considered under these new models, and where possible areas of concern around liability may lie.

FIGURE 5 Possible Loss Scenario for an Economy 4.0 Platform Provider
Source: Marsh



PEOPLE RISK

People will play an important role in Economy 4.0, but the role of the workforce is considerably different under these business models than under traditional ones. Under new models, workforces are becoming more fluid as labour is often supplied on a by-need, contracted basis.

A business model involving the need for drivers, for example, whether for the delivery of goods or for services, will have a higher number of drivers on at peak times and are likely to be paid on a per-service basis rather than by hour. Individuals operating on these platforms have their own equipment and assets and will choose their own hours and terms for working.

This contrasts sharply with traditional models and has raised questions over how existing employment frameworks will apply to these individuals - in both legal and insurance terms. These factors present interesting questions in terms of what the organisation’s employment liability is, and what insurance this would fall under – questions that have not yet been answered with UK legislation.

Under current regulation in the UK, “worker” and “employee” have the following definitions:



SPOTLIGHT

UK Government Looks to Provide Clarity on New Working Models

The UK Government recently promised an overhaul of UK regulation in order to protect the rights of workers, including those working in the shared economy.⁴ The Government has said this will include:

- Enforcing holiday and sick pay entitlements.
- Giving all workers the right to demand a payslip.
- Allowing flexible workers to demand more stable contracts.

Measures may also include higher minimum wages for those on zero-hour contracts, as well as making sure those working under the shared economy are aware of their rights.

⁴ BBC News. "Gig economy: Workers' rights to be strictly enforced", available at <http://www.bbc.co.uk/news/business-42959756>, accessed 11 April 2018.

DEFINITION OF EMPLOYEE (UK):

An employee is someone who works under an employment contract. All employees are workers, but an employee has extra employment rights and responsibilities that don't apply to workers.

DEFINITION OF WORKER (UK):

A person is generally classed as a "worker" if he/she:

- Has a contract or other arrangement to do work or services personally for a reward (contract doesn't have to be written).
- Receives reward as money or a benefit in kind, for example, the promise of a contract or future work.
- Has a limited right to subcontract the work to someone else.
- Is obligated to turn up to work.
- Must work for the employer as long as the contract or arrangement lasts.
- Is not doing the work as part of his/her own limited company in an arrangement where the "employer" is considered a customer or client.

DEFINITION OF SELF-EMPLOYED (UK):

A person is self-employed if they run their business for themselves and take responsibility for its success or failure.

Self-employed workers aren't paid through pay-as-you-earn (PAYE), and they don't have the employment rights and responsibilities of employees.⁵

⁵ "Employment Status", available on <https://www.gov.uk/employment-status/selfemployed-contractor>, accessed 13 April 2018.

If contractors in the UK change from self-employed to worker or employee status, companies will need to provide more rights to these individuals, such as paid holiday and the minimum wage. This changes the liabilities of the company, and will have an impact on their business models and revenues. In a study conducted by the Chartered Institute of Personnel and Development (CIPD), companies stated that they changed their working practices to avoid using agency workers for more than 12 weeks, as once they surpassed this threshold the costs of employing them would be increased as they would be considered employees and not workers.

As the Government continues to grapple with deciding how best to treat workers in the Economy 4.0 age, organisations must ensure that they are correctly providing the legal protections that these workers are entitled to.

Economy 4.0 also raises questions as to who should bear responsibility for workers' actions. Self-employed contractors have traditionally put in place adequate measures to protect themselves. For example, where freelance professional advice is given, the individual would be responsible for their own professional indemnity insurance. However, there are questions over whether individuals working in Economy 4.0 are appropriately protected. Platforms facilitating transactions have two options: create solutions to provide coverage for activities on their platform or work with professional advisers to build a programme to allow participants to obtain appropriate insurance. The structure of this would depend on the specific business model of the organisation.

MANAGING RISKS AND CREATING OPPORTUNITIES IN ECONOMY 4.0

A disjointed, diverse, and dispersed workforce can make risk management difficult from cultural and managerial perspectives. Businesses need to understand how best to build and maintain their culture in this context and ensure that their reputations are protected.

We believe there are opportunities to better manage the supply and demand of customers and employees, build transformative cultures, generate better insights into risk, access new forms of risk funding, and create innovative business continuity plans to respond in the moments that matter.

BUSINESS RESILIENCE

The employee base will be in a constant state of flux. To some extent this is already the case, as staff levels constantly change throughout the year; however, in Economy 4.0, workers can be engaged and disengaged on a minute-by-minute or job-by-job, basis.

Organisations should re-evaluate their data and analytics usage to power business continuity planning and enterprise risk management. Understanding how disruptive technologies can change risk profiles can provide a clearer view of the types of data that are needed. As traditional industries increasingly become integrated in Economy 4.0, new insights will help facilitate risk planning.

In evaluating disruptive technologies, scenario planning can be useful. Second- and third-tier supply chain risks should be evaluated, particularly in the communications, media, and technology sectors.

There is an opportunity to integrate innovation and disruptive technology into a strategic risk management framework. Upgrading management technologies into a single source with easy access to information would highlight the interconnectedness of disruptive technologies and their interdependencies for the Economy 4.0 organisation.

Economy 4.0 is an opportunity for risk professionals to help their organisations prepare for the unexpected. Investing in resources that improve organisational risk alignment should give risk professionals the bandwidth to keep pace with the blistering rate of change organisations are facing.

POTENTIAL INSURANCE SOLUTIONS

Traditional insurance schemes and regulatory frameworks present challenges for the Economy 4.0 talent as open questions around employment status remain. Therefore careful thought and detailed discussion is required to decide which, if any, of the following work best for any given scenario (see Figure 6).



SPOTLIGHT

CMT companies are uniquely placed to take advantage of Economy 4.0.

This is because they often are leading the latest technology and most agile business models, which are able to respond to changing needs and demands. However, how these companies understand today's emerging technologies and the new risks they create remains to be seen.

FIGURE 6 Potential Solutions to Protect and Engage Users of Economy 4.0

Source: Marsh



LEVERAGING DATA FOR RISK MANAGEMENT INSIGHT

Traditional risk sharing in risk management involves the transfer of some or all of the risk to a third party, normally an insurance company. This process is usually driven on an annual cycle of submission of underwriting data to a broker, which then presents the risk to insurance companies to obtain capacity to underwrite the risk.

Like every other aspect of their industries, Economy 4.0 is disrupting this process. The IoT and advances in technology are redefining the how we measure and transfer risk. The risk exposure of an organisation could be monitored in real time by sensors, which would then feed the information to the risk management function of the organisation and to their insurance providers. The exposure and subsequent premium could then be charged in real time rather than retroactively, or as estimates for the future. However, this removes much of the certainty of an annually payable premium.

In addition to real-time premium calculations, risk management professionals will be able to monitor their businesses remotely, in real time, allowing for incidents to be identified and controlled much quicker than is currently possible. This would not be limited to the monitoring of physical assets but could be extended to networks, data stores, and even their workforce.

The arrival of big data in the workplace will help with the predictive analysis of risks and the likely impact they will have on businesses. Working with specialists, organisations can evaluate their risk transfer programme and assess what the right programme is to maximise value to their businesses.

The security of data is becoming increasingly paramount for organisations as more information is being stored in the cloud and transferred between different parties. As capabilities to capture and store data increase, organisations should ensure that their assets are adequately protected in the event that a malicious third party is able to access them.

CONCLUSION

The dawning of the new economic model brings with it substantial opportunities for businesses that are able to define their risk landscape and design proactive and agile risk mitigation strategies to deliver value to their operations.

Increasingly, as the line between personal life and work life blurs for the individual, new insurance and risk management products will be developed to support the Economy 4.0 lifestyle. For the CMT sector, organisations should make sure that the risks involved in these new models do not become a barrier to accessing new opportunities.

This will involve making sure to adequately insure people using the platform where applicable. But, most importantly, with organisations having less control over the users, providers, and goods used under these models, organisations must make sure that the brand and reputation of the business is protected.



About Marsh

Marsh is a global leader in insurance broking and innovative risk management solutions. Our CMT Industry Practice is dedicated to helping you identify, quantify, manage, and mitigate your composite risks. Many companies that operate in the CMT industry sectors are on the frontier of emerging risks, pushing boundaries with their business models and disrupting industries. This means they require tailored advice and customised solutions which go way beyond “standard”. Access to truly global solutions and advice can be key for CMT companies. Ranging from rapidly emerging businesses to international conglomerates, we can cover your needs through our international operations in more than 130 countries. Our flexible approach combined with our significant human and knowledge resources enables us to advise across the entire journey of risk services, or advise on specific projects, risk categories, or challenges.

Marsh works with clients of all sizes to define, design, and deliver innovative solutions to better quantify and manage risk. To every client interaction we bring a powerful combination of deep intellectual capital, industry-specific expertise, global experience, and collaboration. We offer risk management, risk consulting, insurance broking, alternative risk financing, and insurance programme management services.

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