Industrial Innovation
The transition to digital service models

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If you have any questions or would like to discuss these topics please email info@hackandcraft.com.

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Introduction

Want to know how industrial companies are using digital tech to get closer to their customers? Imagine providing end to end solutions rather than your standard commodity sales.

This trend is well underway with famous examples such as Rolls Royce selling hours of jet engine time and Otis Elevator Company offering subscriptions that provide usage insights and automatic software upgrades. But there are many lesser known examples of companies entering the services space and using digital technology to do so.

The following pages will explore more than just why this trend has emerged but also provide real industry examples as well as the challenges faced by these companies.

Otis Elevator Company

55%

of revenue from services

Rolls Royce

50%

of revenue from the provision of TotalCare services:

– An aligned business model for Rolls-Royce and their customers

– Predictable cost of ownership for the customer

– A joint focus on minimising operational disruptions

“Servicing and maintenance are attractive to elevator makers because of profit margins of up to 25%, while new equipment sales yield margins of around 5% to 10%”
– Andre Kukhnin Equity Research Analyst at Credit Suisse

“… The customer focus and pioneering approach of ‘Power-by-the-Hour’ remains at the heart of our CorporateCare® programme today. We continuously seek to enhance our level of service …”
– Steve Friedrich Chief Commercial Officer at Embraer

Data is king

The most valuable companies in the world are those that have large data assets.

In the industrial space there is an intense race amongst traditional hardware suppliers to become established as the defacto industrial IoT platform. Companies as diverse as Hewlett Packard, Ericsson, Siemens and Schneider Electric have all made substantial investments in separate industrial IoT platforms which they hope will become the standard.

Winning platforms will attain the customer relationship. This is because industrial customers will be purchasing solutions in which the core value is in data capture, processing and visualisation. The hardware which generates the data will remain a commodity which can only compete on price and which is vulnerable to commercial pressure from dominant industrial companies in the data and software space.

As data accumulates in the particular vendor its value increases as the predictive power of the software is proportional to the volume of data captured. This creates even greater vendor lock as the logistics of moving to another vendor become more complex.

For these reasons industrial companies must have a role in the data value stream in order to retain their market leverage and access to the customers.

Hewlett Packard Enterprise

$4 billion

investment over the next four years to develop intelligent edge devices

Ericsson

$1.1 billion

investment in aquiring Cradlepoint, to boost its position in the IoT

“Combining the scale of our market access and established relationships with the world’s biggest mobile operators we are making a strong investment to support our customers to grow in this exciting market. ...”
– Börje Ekholm
President and CEO at Ericsson

“Half of all data that exists in the world was created only last year. Yet less than half of one percent of this data was used or analyzed.”
– Judy Marks
President and CEO at Otis Elevator Company

Siemens

$5.4 billion

investment into research and development with a significat earmarked for automation, digitalization and decentralized energy systems

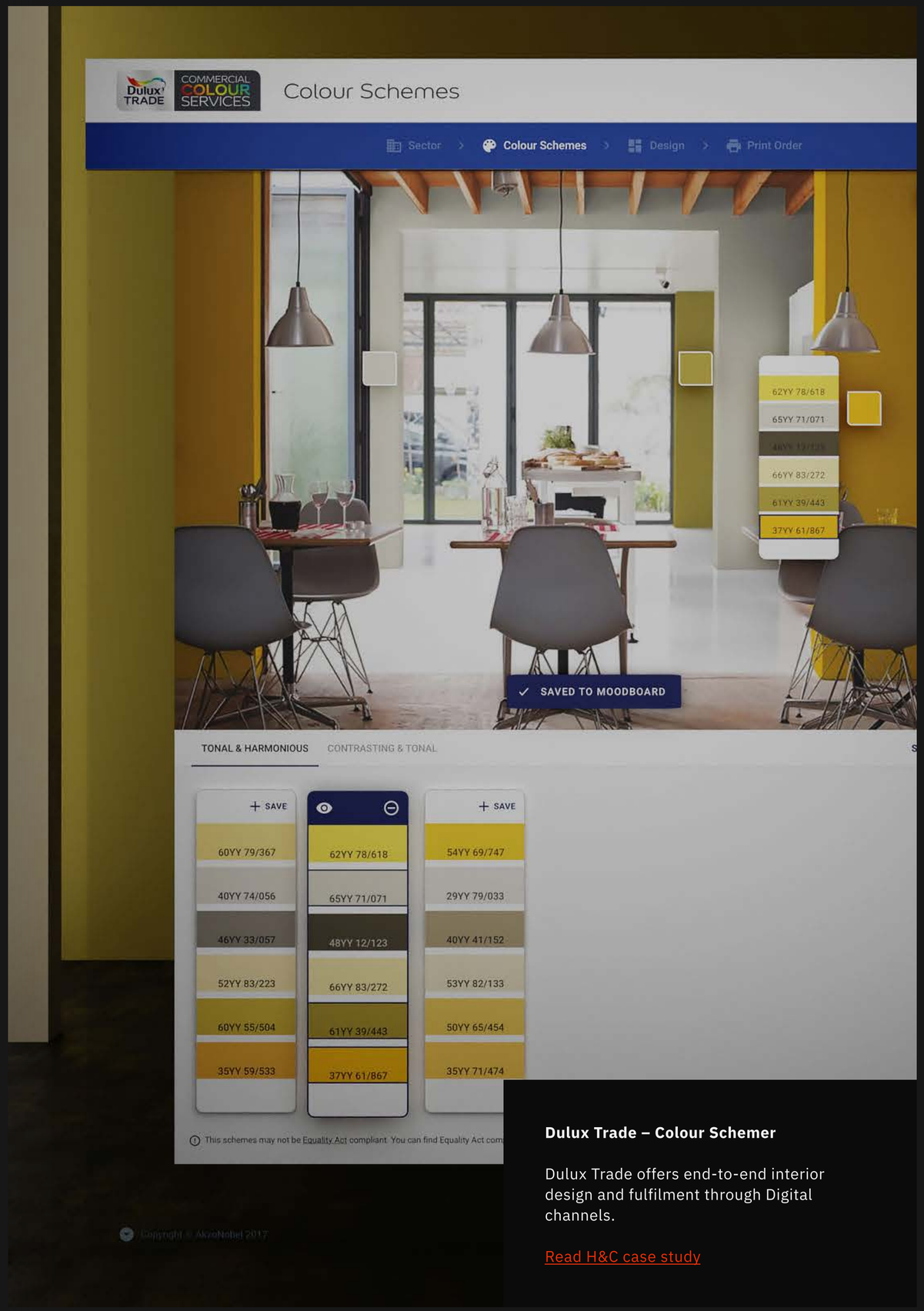
Improve customer experience and flatten costs

B2B customers want automated experiences.

Contrary to what might be expected, the highest value customers often want the most impersonal service. A good example of this is frequent flyers with business class tickets. Unlike holiday makers who dawdle through airports and like a chat with the airline staff, business customers want minimum interruptions and to move forward using automated technology that works without taking off their headphones.

For this reason, Industrial companies must provide self service digital portals which provide deep access to their products and expertise.

Automation is essential to providing a first class B2B customer experience and the front end of this experience is digital services. Not only does automation improve customer experience and allow customer support workers to focus on high value tasks, it also flattens customer support costs. This is essential if companies are going to remain competitive on price.



Dulux Trade – Colour Schemer

Dulux Trade offers end-to-end interior design and fulfilment through Digital channels.

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Collaboration hubs

Industrial value streams are very complex and normally involve multiple companies.

For this reason much of the digital innovation in the sector focuses on making the collaboration between these companies more dynamic and efficient.

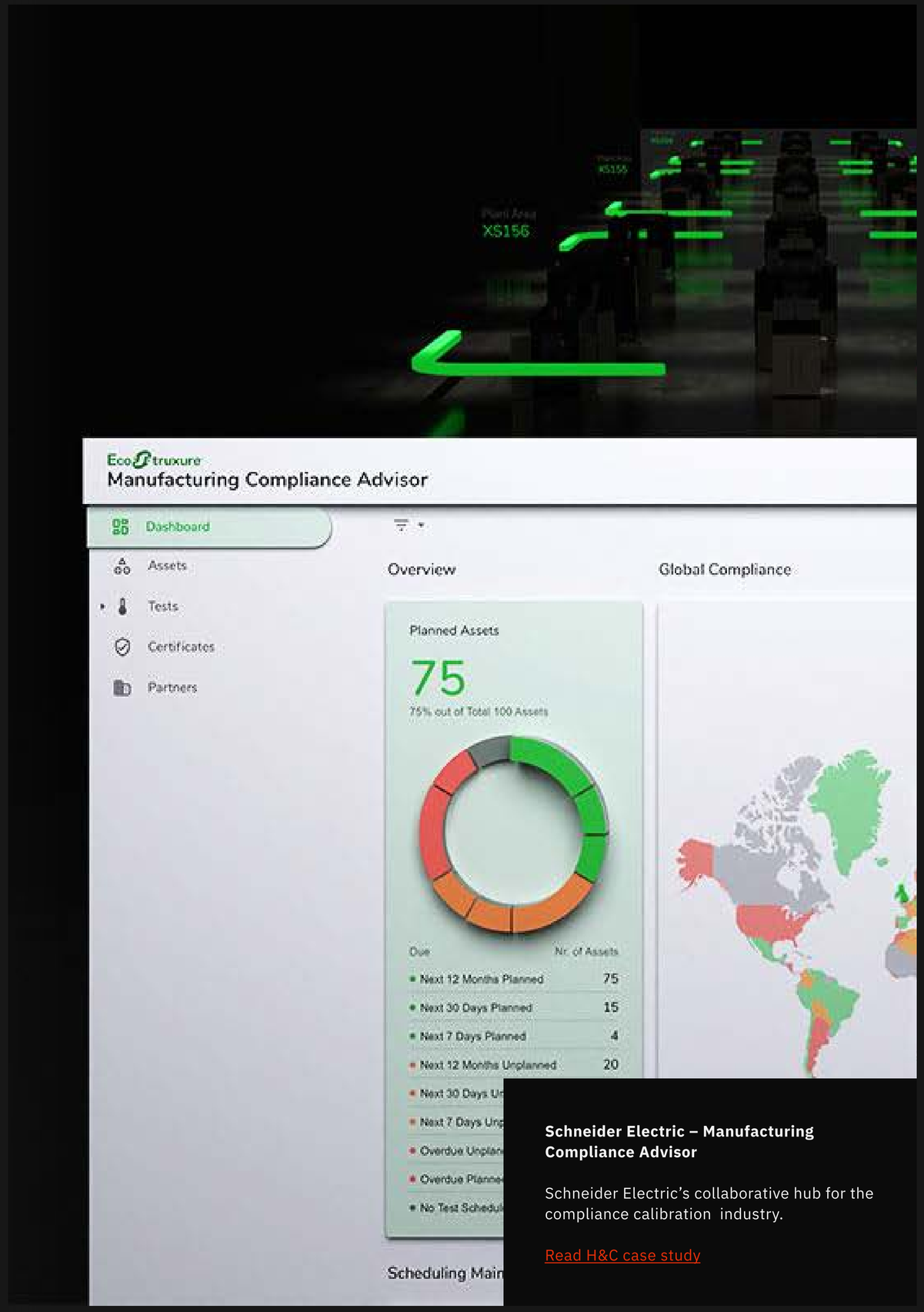
Schneider Electric has released a number of tools to empower specifiers and maintenance engineers as part of their Ecostruxure platform.

Large manufacturers can rightly act as the driving force within industry as they are often the central points through which other markets players can engage.

Manufacturing Compliance Advisor platform allows manufacturers, calibration engineers, and compliance authorities to collaborate through an online platform. This provides intuitive mobile data capture to engineers and insightful dashboard reporting to executive management.

These collaborative hubs are becoming more common as industry needs to make production and supply chains more efficient and resilient. The companies that own these platforms will enjoy industry leverage similar to that of Amazon's digital marketplace.

1 Both systems were built by Hack and Craft in partnership with Schneider Electric.



Schneider Electric – Manufacturing Compliance Advisor

Schneider Electric's collaborative hub for the compliance calibration industry.

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Digital specification portals

If you didn’t know the worlds largest manufacturers are empowering their sales partners with digital tools, you need to keep reading.

Traditionally a key route to market has been via specification engineers. These are often highly experienced engineers working with manual paper based processes which were hard to scale and track. Digital technology is being utilized by leading industrial companies to create configuration and specification tools which simplify the process and allow expert customers to self-serve.

These tools are similar to the configurators which automotive companies use to allow customers to customise the car they would like to purchase. In the industrial B2B setting, they allow customers and sales engineers to click together entire solutions of compatible products, rather than just individual components. Specification tools embed deep knowledge in a scalable and easy to use format which elevates the Bill of Materials into a fully validated and customised solution.

AkzoNobel have created tools which analyse and visualise the lifetime cost and environmental impact of different industrial paint and coating solutions. This enables their specification engineers to instantly show prospects the long term value of their premium products.

Schneider Electric provides specification companies with a tool that digitises the tendering process and amplifies the USPs of Schneider’s product as part of the tendering process. This tool is being rolled out globally by Schneider Electric and has proved very popular with third party companies needing to digitise their operating model.

Specification is an essential and complex part of the industrial sales process and requires intelligent systems. Specification solutions enable tailored tenders to be produced rapidly by more junior specifiers. This reduces sales cycles, improves accuracy and create company wide tandardisation.

Schneider Electric – Building Specifier

Schneider Electric’s tool for electrical and mechanical specifiers.

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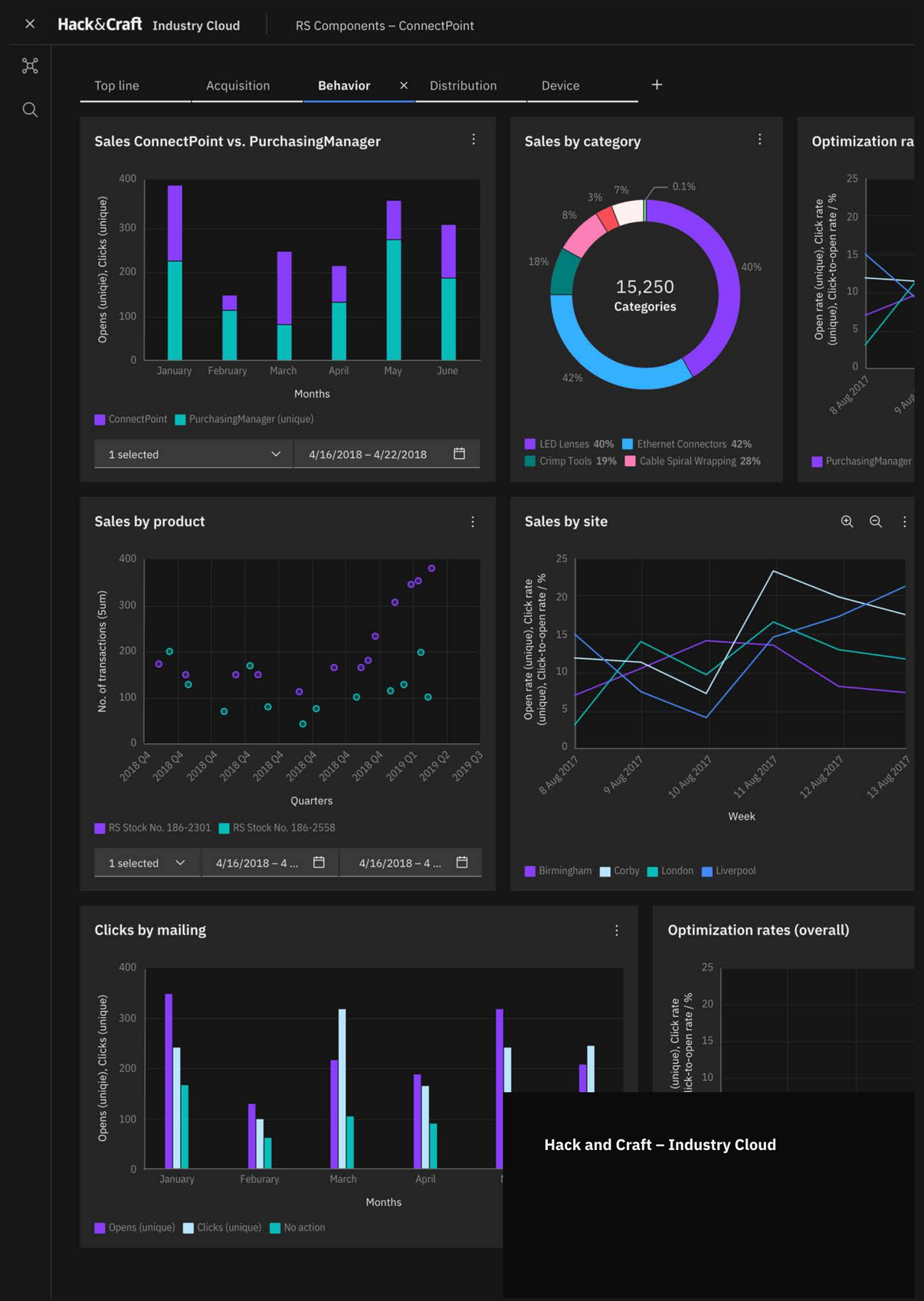
Ideas are cheap, execution is hard

The main reason that we don’t see more innovation in the industrial sector is not because there isn’t a clear understanding of where companies need to get to. The problem is always execution.

A key challenge for industrial companies is avoiding the import of processes from hardware design, development and manufacturing into the digital space. The digital medium has very different properties to physical stuff and therefore requires a different approach.

We see two key principles in all industrial companies succeeding in digital. One is prioritising iteration speed over variance reduction and the other is leveraging market feedback over market research.



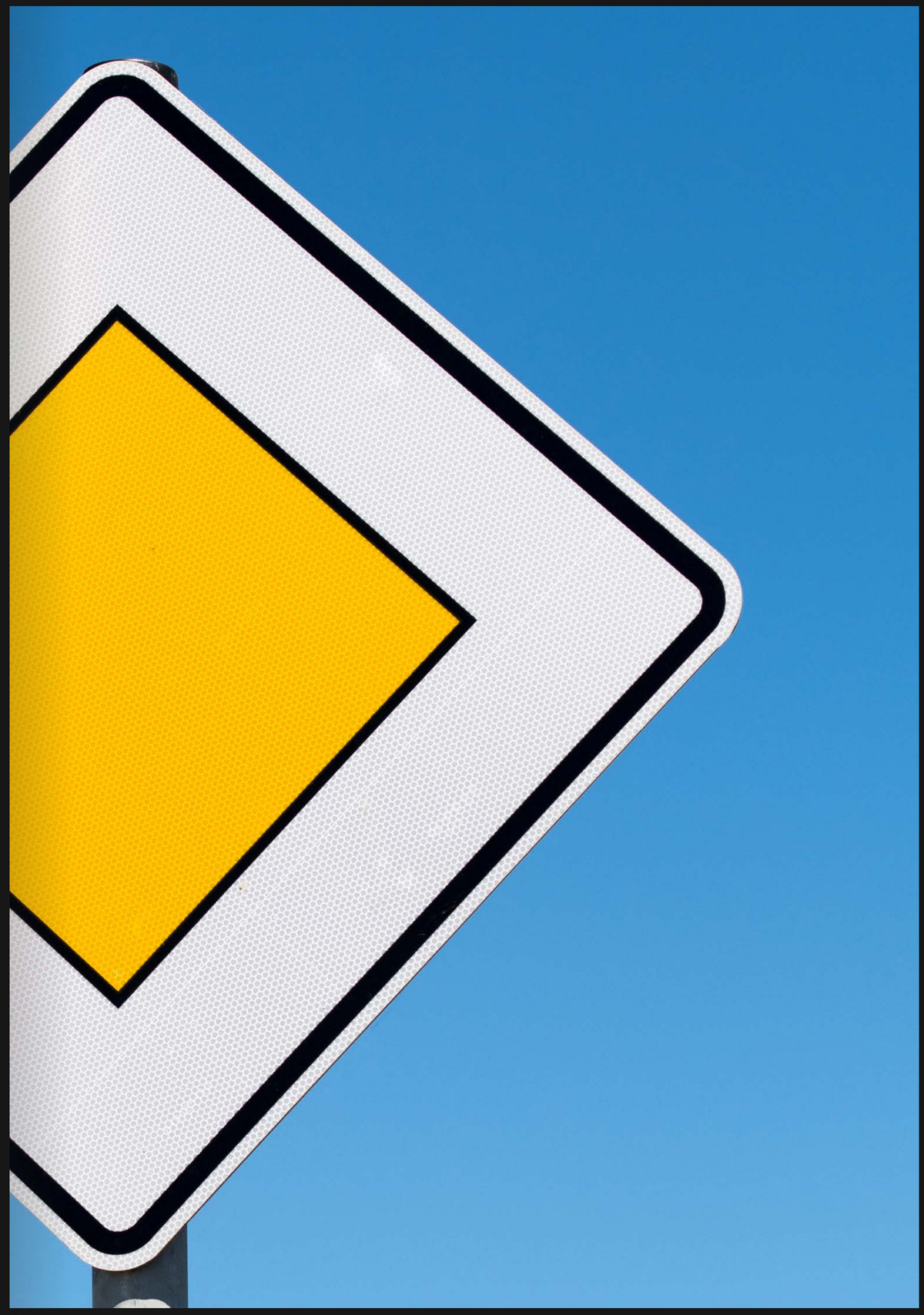
You need to be prioritising iteration speed over variance

The equivalent of manufacturing variance in software is Bugs.

However, unlike hardware all software has bugs and it is impossible to completely remove them. Fortunately the digital medium makes fixes much easier to make.

Successful digital initiatives understand that the inevitability of high variance in the digital medium means that processes must prioritise agility. Hardware production delivers quality by reducing variance in the manufacturing process. No amount of quality assurance process and planning can remove the inherently brittle and slippery nature of digital requirements and implementation.

Therefore, in digital, the most important metric is the speed at which the inevitable quality issues can be addressed.



You need to be prioritising iteration speed over variance

Leverage market feedback over market research

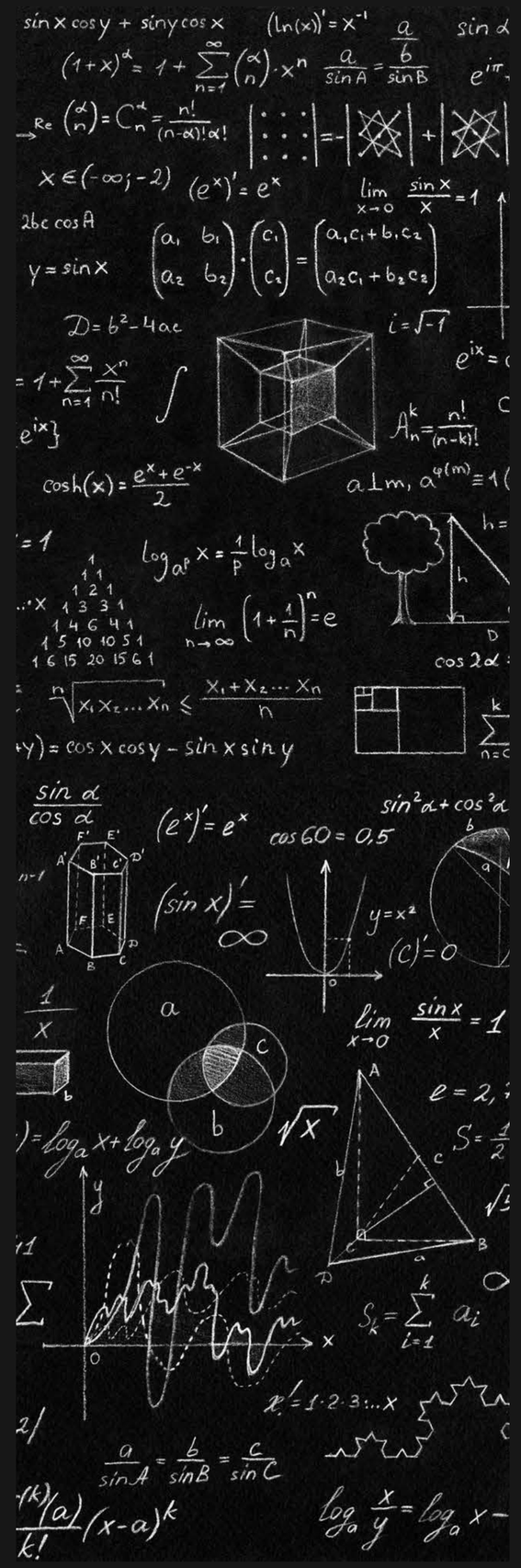
The life span of hardware versions is much longer so the emphasis must be on achieving product market fit immediately on launch.

The cost associated with each new version is very high so manufacturers tend to rely on market research, rather than market feedback, to guide product development.

The digital medium allows rapid iterations with targeted groups of real customers. When the leading SaaS companies (such as Salesforce, Atlassian and Google) want to test demand for a new feature they just build it and release it to 1% of their users. They then test engagement and either rollout or kill the feature. This takes advantage of the special property of the digital medium that is its malleability.

This change of mindset also requires business leaders to change their expectation of the launch of new initiatives. In the past executives would build up to the all important launch day with accompanying marketing, internal communication and pivotal career moments.

Digital initiatives require a series of low key soft launches in which the product is refined through real market feedback. The big bang approach to product launch misses out on digital's best property which is its ability to be guided by real market feedback. Most importantly the big bang mindset creates risk through an entrenched commitment to version 1.0 of the product. It is probably version 5 that the market wants. The real execution test is whether projects can get to version 5 quickly enough.



Always be iterating

This movement is well underway. Within the next 10 years new market leaders will have successfully launched the digital infrastructure of our industrial future.

Companies which don’t stake out a position in the data landscape will be left supplying the commodities that generate the data. This will result in them losing access to their customers. Moreover without digital channels companies will not be able to benefit from the automation necessary to keep their costs down.

The challenges are the familiar ones of digital transformation which face many sectors. However, the industrial sector has very complex problems to solve and its root in hardware manufacturing may hold it back. There are several examples of successful launch of digital services in industry but the reasons for their success are not well understood. It remains unclear if the iterative pace of the incumbents will be sufficient to capitalise on their market position.

Over the next 5 years collaborative digital hubs will emerge backed by leading manufacturers. These platforms will become the main route to market for their partners and competitors. This will give the platform owners an increasingly dominant market position as they are best placed to innovate in future. Just as amazon controls the infrastructure of ecommerce and google of advertising, a handful of companies have a chance to become the de facto platform of industry.

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