Intelligence Applied

Content themes:

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- Finding faster growth
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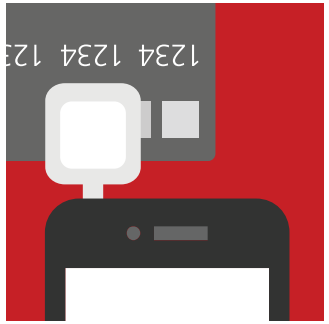
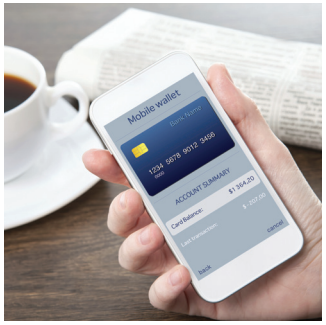
- Research excellence

Demystify the future - see beyond the hype





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CEOs recently told IBM that technology is the most important external factor shaping their businesses. But not all innovations that can change the world will. Leaders realise that chasing everything that gets press attention will dissipate resources, but ignoring technological innovation is courting ruin. They need a way to distinguish disruptions from distractions - a meaningful framework for distinguishing credible innovations from those not yet ready for primetime.

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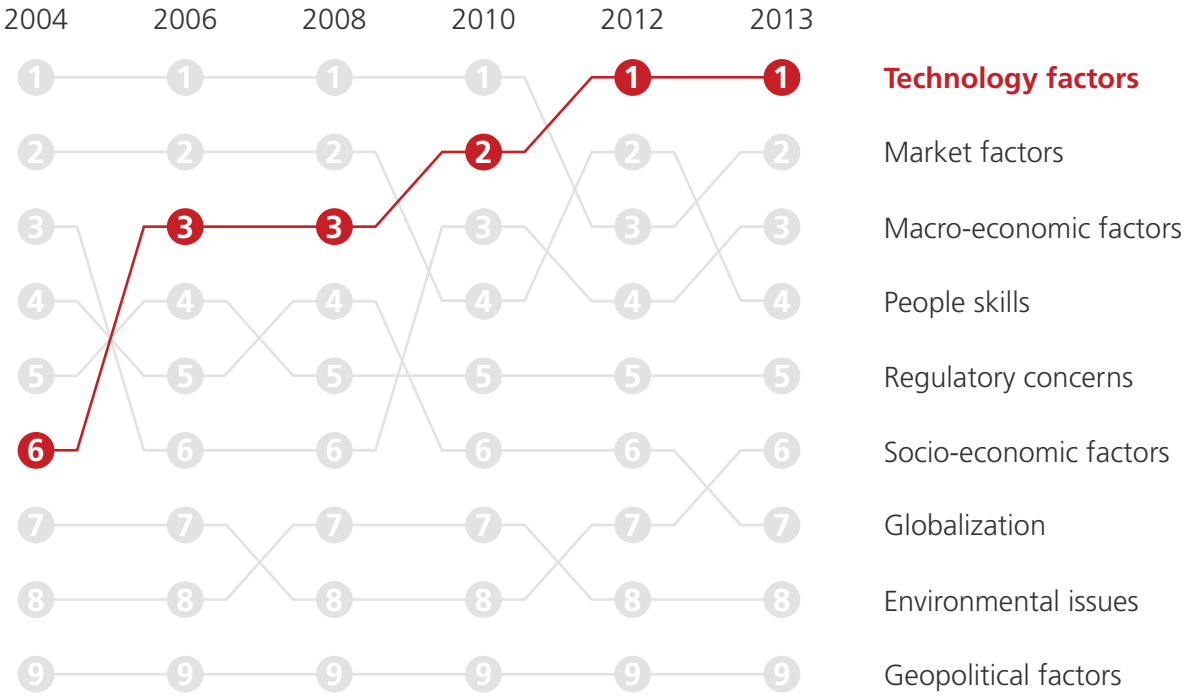
Tech-speak can be off-putting. But managers shouldn't delegate technology planning to specialists, because their own understanding of customers and channels is just as important as the specialists' knowledge of hardware and systems. Management teams need to bridge the divide and combine technical and non-technical insights in their business planning, but how?

TNS works with many big technology companies and non-tech companies seeking advantage from innovation. Based on this experience, we have developed a framework to assess innovations' potential for disrupting markets - **the Innovation Stack**. It provides a way to integrate the insights of tech-experts, consumers and channel partners into a more precise assessment of the risks and opportunities resulting from technological change.

Technology at the top: CEOs think technology will be the most important external force shaping the future of their enterprises



Source: The Customer-activated Enterprise, Insights from the Global C-suite Study, IBM

Innovation can't go it alone
Innovations can address unmet consumer needs, sharply reduce costs and otherwise upend markets, but they never do so alone. Modern technology is intrinsically connected. How well a new technology integrates with other technologies and capabilities is what ultimately dictates whether it will make it into the mainstream or not. Understanding this 'ecosystem' is critical to forecasting its success or failure.

The triumphant Apple iPad was technically not so very different from the disastrous Apple Newton. The main difference was that no ecosystem existed to support the Newton, but a stable and firmly established one was there to welcome the iPad. The later device could leverage an entire ecosystem: Wi-Fi, a robust library of iOS applications, digital music, streaming video and established communities of users and developers. Between the Newton and the iPad the ecosystem developed to enable the device and ensure its success.

To identify which new technologies are iPads and which are Newtons, we have to understand the full context into which they are launching. This context includes other technologies, but also people, communities and business relationships. The Innovation Stack illuminates all of these aspects. It allows us to integrate the way engineers and software developers see an innovation with the way consumers and channel partners will use it.

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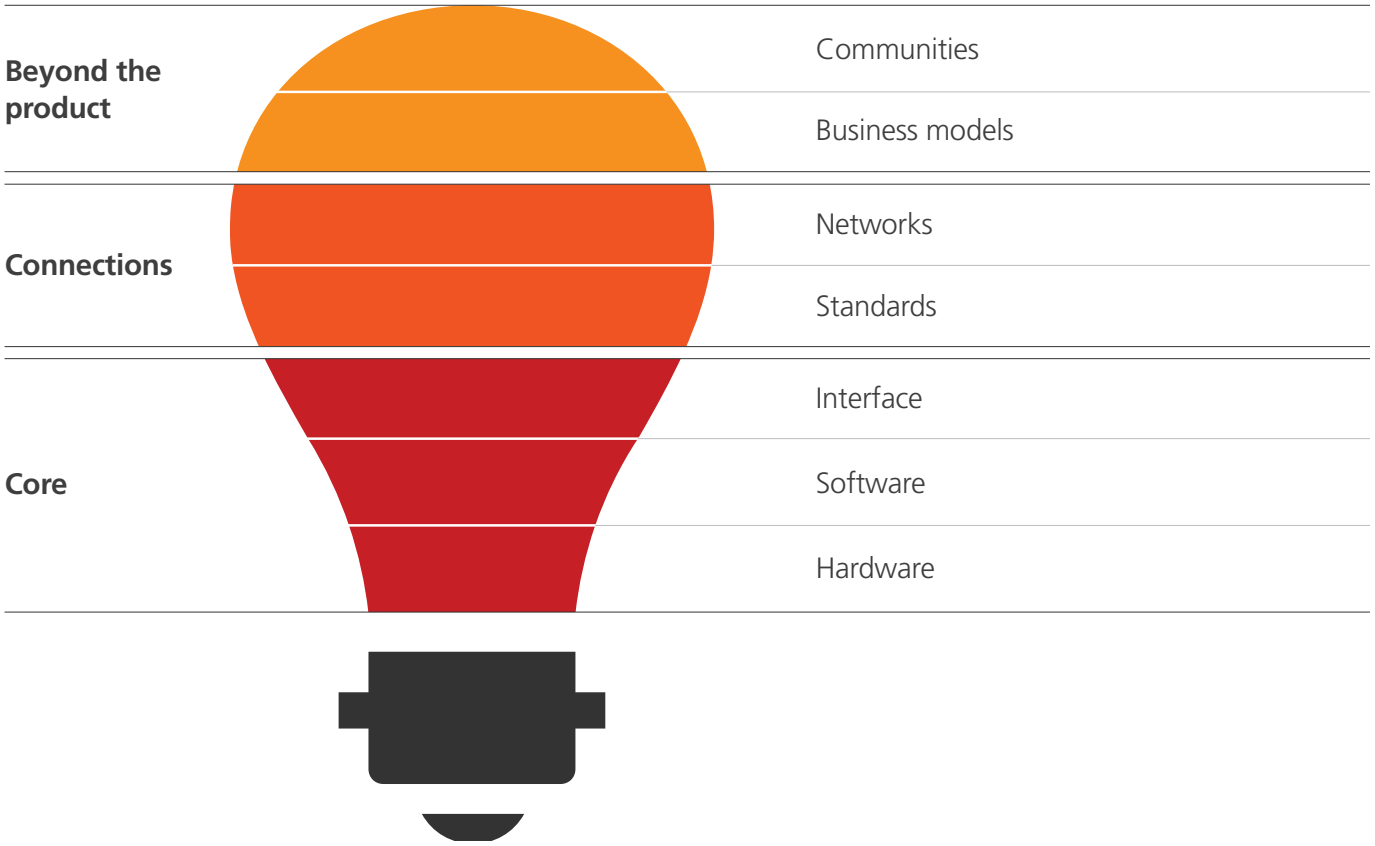
Mapping the technological ecosystem
The Innovation Stack maps the full ecosystem a technology requires to deliver a benefit to end-users. We build it from interviews with tech experts, supply chain and channel partners as well as potential consumers. It forms a unique synthesis of a potential innovation and the connections that dictate whether, when and how the market will accept it.

The Innovation Stack enables businesses to determine whether the uses that would motivate consumers to adopt an innovation are actually possible given the current state of the surrounding technologies and the ecosystem. If significant performance gaps exist, then the new idea is not ready for the mainstream. For the technology producer, filling those gaps is the key to success. For businesses looking to leverage the technology, knowing what needs to happen to make it market-ready is critical to ensuring incremental product sales.

The Innovation Stack maps the full ecosystem a technology needs to succeed



Stack-based analyses help explain why fortunes have been lost waiting for content owners to play ball and enable better devices to sweep away the tangle of cables behind TVs, VCRs, satellite boxes and DVD players. It demonstrates why the much-hyped mobile wallet technology is still waiting to take off in the US, whilst far simpler mobile card readers (which enable readers to take credit card payments with minimal investment on their part) are transforming retail (see Innovation Stack diagram on the next page).

The businesses that navigate potentially disruptive innovation successfully are those that understand the direction in which the ecosystem is evolving, and the point at which adopting new technologies will deliver incremental benefits to their own bottom line. They can see what the different players in the ecosystem need to do to enable new technologies to take off, what will motivate some to do it, and others to resist. They are the ones who can see the hands of all the players sitting around the table to decide an innovation's fate.

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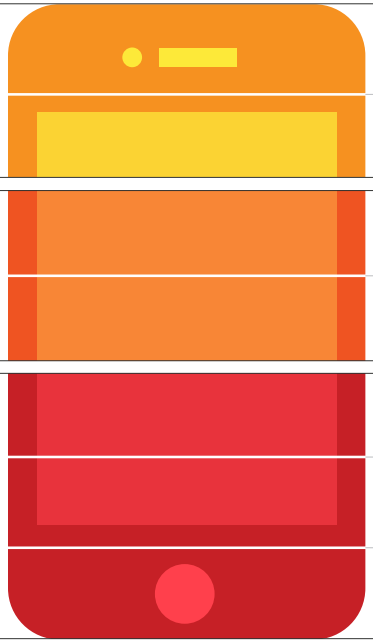
Taking and making mobile payments

		Slow uptake: Mobile wallet Big investment, no clear ROI for merchants	**Rapid uptake: Card readers for mobile devices** Low cost, high value for retailers; convenient new option for consumers
Beyond the product	Communities		
	Business models	Retailers don't have customers demanding to pay via phone	Small businesses make more sales, faster and more safely with authorised card transactions
Connections	Networks	Millions of existing card readers embedded in retail systems and kiosks would need to be changed	Reads existing cards, processes transactions across existing networks
	Standards		
Core	Interface		Apps run on existing phones, are easy to download, utilize cellular networks and existing data plans
	Software		Readers are inexpensive peripherals, fitting existing headphone jacks
	Hardware	Phones require new NFC* chip	



* NFC: Near Field Communication

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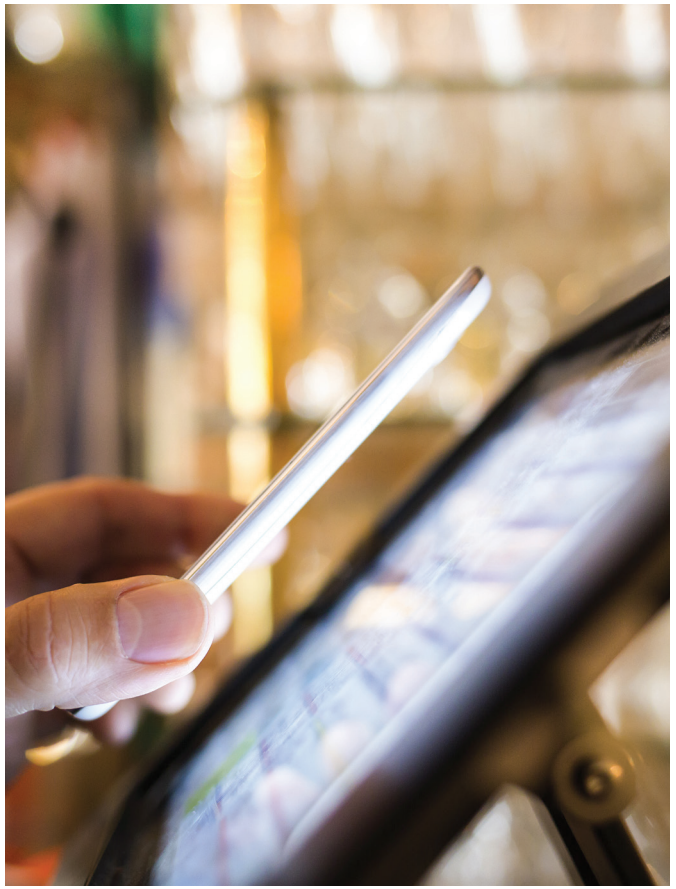
Ready to reshape retail?
Stack analysis in action

Let's take an example of potential technology-enabled innovation that sits near the top of many retailers' agendas, and is therefore also important to manufacturers who sell through retail. Currently bricks and mortar retailers operate at a disadvantage compared to online competitors like Amazon: they cannot recognise their customers until they finish shopping, pay and swipe a loyalty card. At this point it's too late to personalise their shopping experience, leverage data to direct shoppers towards interesting offers, promotions and new products.

Shoppers' smartphones, combined with sensor or beacon technology, appear to offer retailers a viable solution: these are the core technologies that can sit at the foot of an Innovation Stack to deliver personalised shopping.

But before retailers start making big investments in this technology, they would be well advised to ask hard questions about the whole ecosystem:

- What incentives do handset makers have to enable the function and what will this usage do to the phone's performance?
- What systems do retailers need to read the signals and match users to shopper data?
- How will consumers shop in store, and how will this impact store layout?
- How does smart packaging and smart signage fit into the equation?
- How will acting on this data require remaking their promotion and data sharing arrangements with manufacturers?
- And most importantly what will convince consumers to let themselves be electronically recognised? Which types of personalisation will they welcome, and what will be seen as an invasion of privacy?



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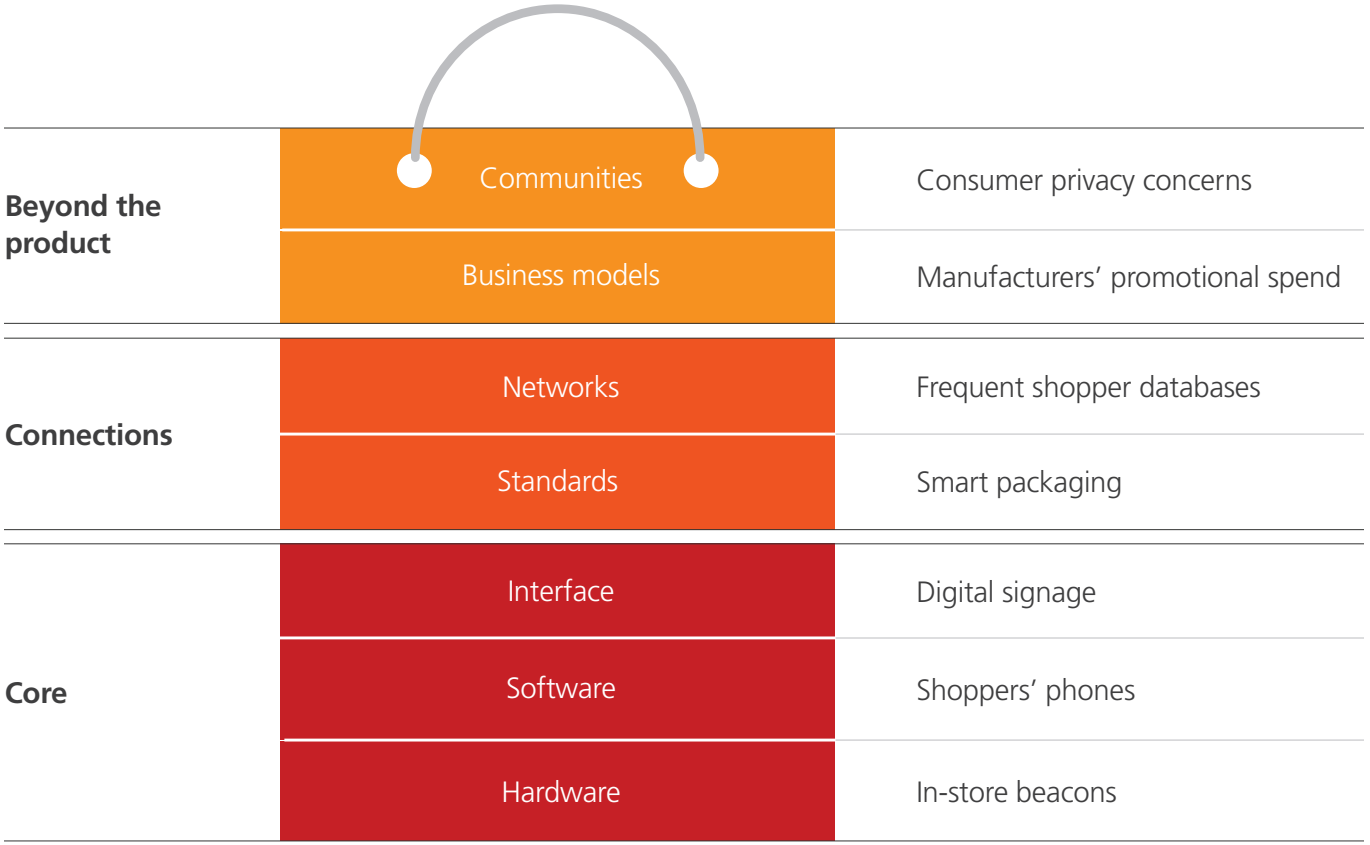
Is the ecosystem ready for personalised shopping?
Connected retail has the potential to personalise the shopping experience, but adoption will require the willing participation of retailers, device makers, manufacturers and most importantly shoppers themselves. Each party will need to find incremental advantage to embrace the innovation.



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The importance of an incremental view
In a complex ecosystem like mass retail, many parties have the capacity to block innovation. Innovation therefore happens fastest when it offers incremental benefit to each of the players in the stack, including (in this case) shoppers. Too often we see potentially beneficial innovations fail to catch on because their sponsors did not account for another player in the system failing to support them: retailers holding back from investing in mobile wallet readers, US cable TV operators not releasing their content to innovative TV interfaces. Planning for innovation should include a precise understanding of what incremental gain looks like for each player, in order to overcome these barriers.

It is important to note that the incremental impact of technology isn't always positive. In rapidly changing markets incremental benefit can be the absence of loss. The repercussions of not adopting innovation can be dire. Before they can safely pass on enabling personalised shopping, retailers need to satisfy themselves that their shoppers will not head to the store across the street. Other players in the ecosystem must make similar calculations: when a toothpaste manufacturer weighs up the retailer's request to add RFID* tags to its packaging, it needs to understand what it will lose if it rejects the tags - but the next brand on the shelf adopts them. In the connected world innovation is often required just to keep up.

A living document of change
Because ecosystems have so many moving parts, the Innovation Stack must be a living document. It must capture the trajectory of innovation: rarely a big bang moment of disruption, but an evolutionary process wherein the new technology grows in alignment with the environment into which it is being deployed. Most technologies grow iteratively. The most successful innovators are those who read the process and position themselves to benefit from where the technology is heading.

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* Radio Frequency Identification (RFID)

About Intelligence Applied
Intelligence Applied is the home of the latest thinking from TNS, where we discuss the issues impacting our clients, explore what makes people tick and spotlight how these insights can create opportunities for business growth.

Please visit www.tnsglobal.com/intelligence-applied for more information.

About TNS
TNS advises clients on specific growth strategies around new market entry, innovation, brand switching and customer and employee relationships, based on long-established expertise and market-leading solutions. With a presence in over 80 countries, TNS has more conversations with the world's consumers than anyone else and understands individual human behaviours and attitudes across every cultural, economic and political region of the world.

TNS is part of Kantar, the data investment management division of WPP and one of the world's largest insight, information and consultancy groups.

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About the author

Lynne Thomson specialises in advising technology clients on new product development and consults with clients in other industries on how to leverage technology for competitive advantage.

Throughout her career she has dedicated her time to understanding how consumers and enterprises adopt new technologies, starting with the shift from analog to digital mobile, to the rise of the 'Internet of Things', to the evolution of medical imaging as it has spread from academic medicine to general use in many countries.

Lynne has a PhD in Communication from Northwestern University, an MBA from Tulane University and a BA from the University of North Carolina at Chapel Hill.

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