Building Blocks of Customer Trust

End-to-end visibility across the ecosystem and transparency taken to the next level by blockchain
Imagine if...

- You could be sure the food you were buying was safe to eat like never before, with producers and retailers able to quickly pinpoint contamination or improper storage and remove affected items from the shelf immediately?

- You could nearly eliminate food waste throughout the supply chain by redirecting products nearing expiration to local food pantries?

- You could immediately check the sustainability or ethical credentials of a new sweater before you bought it, even tracing its provenance all the way back to the individual animal the wool was sourced from?

- You had a way to immediately verify the brand-name handbag you want to purchase on an online retail site is authentic and not a cheap counterfeit?
Trust has always been a cornerstone of doing business. But with more and more commerce moving to digital channels, maintaining consumer trust is now more complex and challenging than ever. The reason? Today’s consumers have so many more choices and elevated expectations about the transparency brands and retailers should offer.

As consumers, we’re all asking ever more demanding questions of the products we purchase. Is the item on the shelf actually what it says it is and not a counterfeit? Has the perishable food product been kept cold throughout its journey to the store? Is it definitely within its expiration date and safe to eat? Can we believe a product’s claims to be organic or ethically produced? Consumers expect the answer to each of these questions to be yes. We expect brands and retailers to fulfill their purpose.

Brands and retailers who can’t answer yes to these kinds of questions risk losing their customers’ trust and their business. Accenture’s research has shown that nearly half of customers who switch brands do so because they lost trust in the company.¹

But doing this quickly, accurately and efficiently is extremely difficult. When every organization maintains its own data there is no “single version of the truth” all parties can rely on. Tracking and tracing individual items throughout complex cross-border value chains takes a great deal of time and resources. Separate siloed databases must be laboriously reconciled, or third-party documentation chased halfway around the world.

That’s slow, expensive and error-prone. It tests consumers’ patience and fails to give them the product assurance they now demand. It can prevent brands and retailers from truly delivering on their purpose. It raises the risk of safety issues that negatively impact consumer trust. And it hinders opportunities to add value across the supply chain.

Building an Intelligent Supply Chain capability that can connect parties across the ecosystem is critical to building the trust and transparency customers demand. As operations become ever more digitally connected, the supply chain can be transformed by seamless interoperability, real-time visibility and secure collaboration between partners and customers.

And there’s one technology in particular that’s set to be a critical component of this change...
How will Blockchain alter ecosystems?

Blockchain and the broader field of distributed ledger technology can potentially revolutionize supply chain transparency. It lets all parties work together to manage product information, from growing and manufacturing through to distribution and retail. With a single source of truth that all parties can rely on, supply chain visibility exists as it never has before. With that visibility comes the transparency needed to build customer loyalty and trust.

How does it work? Think of blockchain as a way to record transactions that lets stakeholders write, read, share, and use the same information in a secure and mutually beneficial way. The data on a blockchain is distributed among all the parties involved, resulting in a shared source of information which is transparent yet still allows everyone to control who sees what at a data element level.

The traditional ledger structure between organizations is slow and error prone; existing infrastructure is manual intensive and dated. All parties maintain their own ledgers. Any exchange of data requires all participants to communicate directly and reconcile to ensure consistency, driving significant manual effort and inefficiency.

A distributed blockchain ledger allows for decentralized, replicated, shared and cryptographically secured operations which are validated by mass collaboration and applies to many transactions. All market participants work from the same data set introducing significant efficiency improvement.
Accenture’s research has shown consumer packaged goods businesses are already deploying blockchain in areas like warehouse management, sourcing and procurement, and product design and development. More than half of retailers (56 percent) think blockchain will have an impact on last-mile delivery within three years, and a similar number (49 percent) think the technology will impact their ability to deliver hyper-personalized customer experiences over the same timeframe.

**Why blockchain is a game-changer for track and trace…**

**It’s trusted.** Because all the parties independently validate the data, blockchain provides a single version of the truth that separate organizations, even competitors, can all rely on.

**It’s secure.** Strong cryptography orders transactions and consensus mechanisms ensure agreement across the blockchain, dramatically reducing security risk. There is also no single point of failure, bringing enhanced resilience.

**It’s tamper-evident.** Any attempt to tamper with or alter the data on a blockchain can be immediately identified by all parties in a real-time audit trail.

**It’s flexible.** “Smart contracts” can be used to automatically enforce rules in the blockchain, opening up possibilities of instant real-time multi-party transactions based on mutually trusted data.

**It’s scalable.** Blockchain technology has proved it can excel straight out of the box in extremely high-throughput environments, such as high-volume equity trading.

**It’s streamlined.** By removing the need for complex and laborious reconciliations and reimbursements between partner organizations, blockchain reduces effort and cost.
Blockchain: Radical transparency in the supply chain

By creating a single source of shared truth, updated in real time, blockchain supports fast and intelligent operations right across the consumer goods and retail value chain. From food safety to anti-counterfeiting, and from international shipping to ethical manufacturing, there are numerous ways to use the technology to solve some of the biggest pain points for manufacturers, growers, suppliers, retailers, and customers...

No Traceability or Paper Based Traceability

All steps tracked through tamper evident blocks
The product safety opportunity

Right now, tracking and tracing perishable food like fresh fruits, meat, fish, or frozen products through the supply chain is very time-consuming. Even the largest corporations can spend weeks or months retrospectively tracing a product’s origins and current location. When food contaminations occur, these delays don’t just raise the risk of customers falling sick, they also impact the bottom line. The Grocery Manufacturers Association estimates that most companies going through a Class One recall can expect a financial impact of $10 million or more.iv

However, when relevant data is tracked on a blockchain, the location, provenance and distribution of contaminated or faulty products can be pinpointed in a matter of seconds and removed from sale with almost surgical precision. That’s not just faster and safer for consumers, it’s also far more efficient for manufacturers and producers, as well as significantly reducing food waste and avoiding the negative brand impact of broadcasting product recalls on the nightly news.

Combining blockchain with the Internet of Things (networks of internet-connected smart devices and sensors able to collect and share data also known as the “IoT”), companies can head off product safety issues before they even happen. Blockchain-connected IoT sensors embedded throughout the supply chain can provide a real-time audit trail for instantly identifying tampering and checking the right environmental conditions are being maintained. Using blockchain-connected “crypto-seals”, for instance, companies are already exploring how to help consumers ensure individual containers of baby formula haven’t been opened before hitting the store shelf.

The product authenticity opportunity

When we buy a new sweater, how do we know it’s really lambswool? Are those really Colombian beans in our morning coffee? When we get our car repaired, how do we know the replacement parts are actually supplied by the automobile manufacturer?

Right now, it’s impossible to answer these questions with total certainty. So we rely on trust. If we have confidence in the brand, the retailer, or the supplier, we believe what the label says. But counterfeiting is a major problem worldwide, estimated to be worth something like $1.2 trillion each year, with fraudsters willing and able to flood the market with fake goods presented as genuine or premium products.

Blockchain offers a new and more effective way to prove product authenticity. By tagging each individual product item with a RFID chip, manufacturers can trace exactly where their products end up. And, with a simple swipe of a smartphone app, end-consumers and B2B buyers alike can view the full journey the product has taken. The result: all parties get the assurance they need that the goods they’re buying are precisely what it says on the label.
Look at what Thales, a global leader for the aerospace, transport, defense and security markets, is doing in the aerospace industry.

Working with Accenture, the company has proved it can create and validate unique cryptographic "fingerprints" tied to critical components in its aircraft hardware. It is linked to a blockchain built on Hyperledger Fabric and uses the resulting system to verify product authenticity to end buyers in the manufacturing process.
The **sustainability opportunity**

Today’s consumers are more concerned than ever about the provenance and sustainability of the products they buy. Nearly half of US consumers now say they would definitely or probably change their consumption habits to reduce their impact on the environment, and for Millennials that figure rises to 75 percent.v

So how can businesses guarantee their products are produced ethically and sustainably – and easily communicate that to consumers? Using a tamper-proof blockchain, every step in the growing and manufacturing process can be tracked, giving all parties an auditable record of exactly how, and from what, each product was created.

Look at how chocolate brand Tony’s Chocolonely is using blockchain to combat predatory labor practices in the cocoa industry. Working with Accenture, the company piloted the use of a blockchain during the Ivory Coast’s cocoa harvest, where more than 900,000 kg and 50 shipments of beans were tracked and verified as 100 percent free from slave-labor.vi

Or what about London-based designer Martine Jarlgaard? By plugging into the Provenance blockchain platform, this fashion innovator is creating an entirely new way to track the path of her products from raw materials all the way to consumers’ homes, guaranteeing the sustainability of the materials and methods used, and even tracing the wool in a garment back to the individual Alpaca it was sheared from.vii
A cultural shift has made sustainability mainstream and personal. Consumers are starting to believe they can really make a difference, so they are carefully choosing to buy from companies that stand for something bigger than their products and are more likely to identify with brands reflecting their own values and beliefs. As consumer goods brands seek to achieve relevance at scale, they can seize the possibilities of blockchain and address this evolving consumer need for verifiable sustainable products.

Closing the loop in the circular economy

Although sustainability is increasingly front of mind for consumers, there have so far been precious few ways for them to connect directly with small-scale suppliers at the beginning of the supply chain and incentivize those who are actually driving sustainable practices. Now, working with Mastercard, Amazon Web Services, Everledger and Mercy Corps, Accenture is changing all that. Combining blockchain, digital identity, and payments technology, the initiative’s creating a new circular supply chain capability which lets the end-consumer identify the individual producers of a product and reward their sustainability efforts financially with a “tip” made by direct payment.

See more here.
and has the potential to disrupt the consumer goods and retail supply chains dramatically. That creates a new imperative for every company: to use the technology to disrupt the ecosystem — or run the risk of being disrupted when someone else develops the industry platform.

Consumer goods and retail businesses need to be thinking about their blockchain strategies now. Here are four steps to get started...

01 **Consider how blockchain will disrupt your ecosystem**
Consumer goods and retail supply chains are a clear and compelling use case for blockchain. Whether you plan to develop your own distributed ledger or not, your business will likely be affected in some way. Blockchain is coming and you can choose to lead, follow or wait and see. Make certain that an informed decision is made about how this choice impacts business strategy. This is important and you can't be passive.

02 **Focus on the business value**
Understand blockchain is a tool, not a solution in its own right. And just like any other tool it needs to be pointed at the right problems to deliver real value. So work with the business to find the key pain points that blockchain can eliminate. Remember, too, that trust is key to blockchain's effectiveness.

03 **Find the minimum viable ecosystem**
Blockchain is a team sport, not a solo climb. The technology streamlines environments which are dependent on sharing information between distinct entities, each with their own data sources. To help it reach its full potential, you need to go beyond your organization's four walls and outside trusted partners to all touchpoints across a complex global supply chain. There's no value in going it alone.

04 **Innovate, experiment, fail fast and move on**
Blockchain works. And it scales. There's no longer any need to prove the concept of the technology. Now it's about proving the value in the real world. So, select pilot use cases, test and iterate the viable solutions and scale them up across the business.

Blockchain will revolutionize the future of customer transparency and trust. It’s set to catalyze new ways of engaging with customers and consumers, new ways of working, and new ways of delivering on brand purpose. The time to disrupt the ecosystem and release the trapped value in your supply chain is now.
About Accenture

Accenture is a leading global professional services company, providing a broad range of services and solutions in strategy, consulting, digital, technology and operations. Combining unmatched experience and specialized skills across more than 40 industries and all business functions—underpinned by the world’s largest delivery network—Accenture works at the intersection of business and technology to help clients improve their performance and create sustainable value for their stakeholders. With 477,000 people serving clients in more than 120 countries, Accenture drives innovation to improve the way the world works and lives.


For more information

Carly Guenther
Managing Director
carly.l.guenther@accenture.com

Richard T. Meszaros
Managing Director
richard.t.meszaros@accenture.com

Melissa M. Denner
Senior Principal
melissa.m.denner@accenture.com

References

i Accenture Strategy. (2017.) “Global Pulse Research.”


iii Accenture (2018.) “The retail supply chain: Underutilized growth lever.”


vi Accenture Research 2018.