



SUPPLY CHAIN DIGITAL TRANSFORMATION

OPPORTUNITIES FOR PUBLISHERS

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WHY SUPPLY CHAIN DIGITAL TRANSFORMATION?

Analytics and cloud are two crucial drivers of digital change. This eBook shows HP's Piazza as an example of how data sharing via the cloud fosters analytics that empower collaboration between publishers and printers, thereby, accelerating supply chain digital transformation.

Supply chain leaders seek to address the following issues with analytics:



Optimization of inventory levels to balance working capital investment with service levels



Improved forecast accuracy



Enhanced understanding of demand patterns



Improved product tracking traceability



Optimized production and sourcing to reduce total landed costs

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Similarly, publishers also report facing several issues. Average fill rates of **85%**, i.e., **15%** of sales are missed or delayed (if back ordered) and publishers can't or don't measure their service levels. They are also impacted by excessive inventory levels as major publishers hold over three hundred days of stock at hand. The print book world is under continuous pressure to improve financial performance.

Thus, the highest priority areas can be enlisted as:

- Effective management of global distribution and global manufacturing
- Direct fulfillment to the consumer
- Reduction or elimination of warehouse costs and footprints
- Consolidation and securing of source files
- Customization and personalization

Changing demand patterns require publishers to collect and dissect more data at all levels to accurately forecast future sales. To be transformative, publishers need to adopt advanced digital technologies as well as change the way they deliver books to customers and one of the most significant factors publishers need to transform is how they manage inventory. To move into the future, understanding the real costs of inventory should be a financial literacy requirement for all publishing executives.

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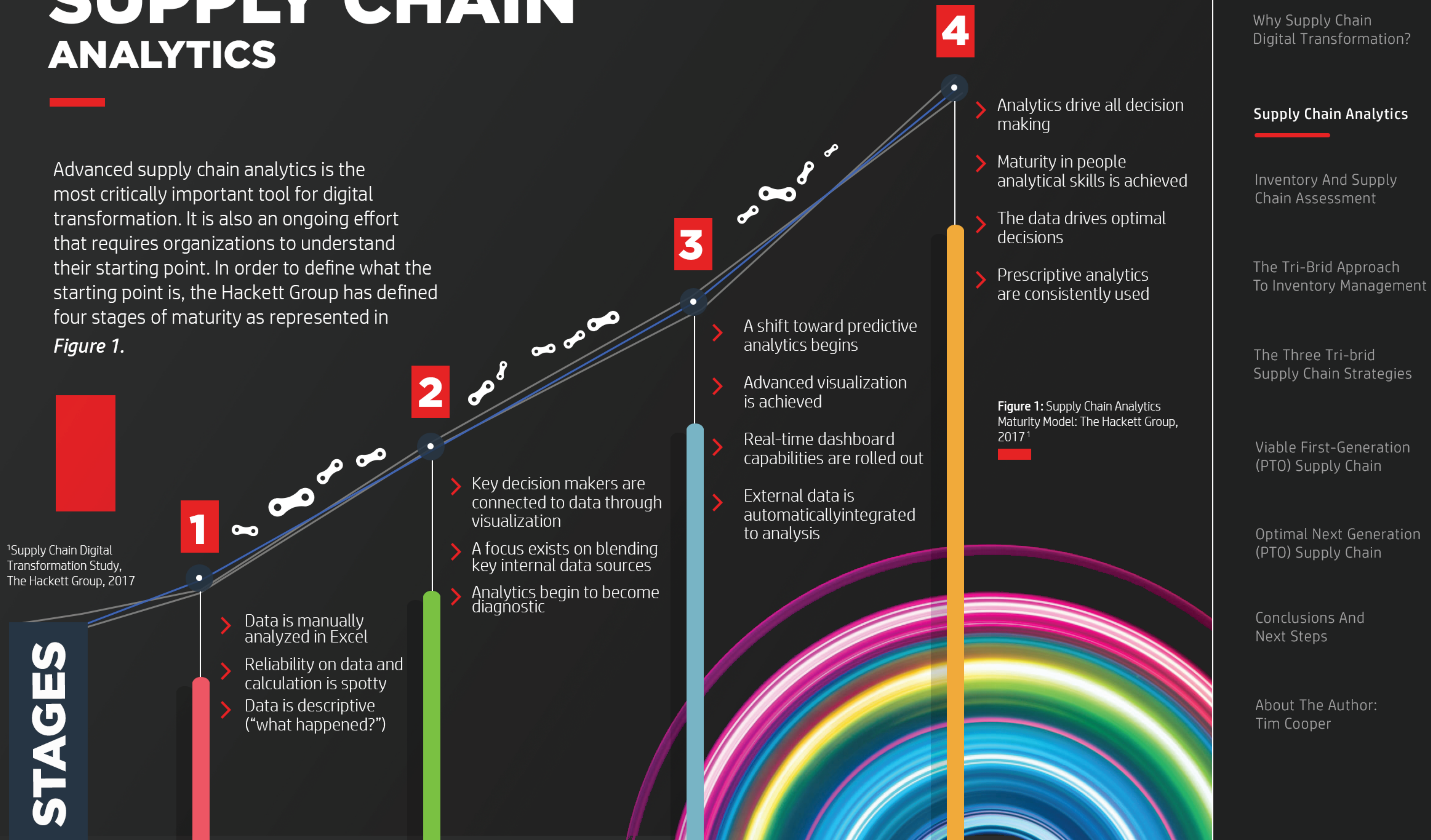
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SUPPLY CHAIN ANALYTICS

Advanced supply chain analytics is the most critically important tool for digital transformation. It is also an ongoing effort that requires organizations to understand their starting point. In order to define what the starting point is, the Hackett Group has defined four stages of maturity as represented in *Figure 1*.



¹Supply Chain Digital Transformation Study, The Hackett Group, 2017

The Hackett Group also points out that “...the organizations in the early stages of the maturity model (stages 1 and 2) may interpret having a visualization tool or an advanced statistical analytics suite as having analytics. However, there is an ecosystem of required technologies that need to be assembled underneath the visualization tool to perform as a comprehensive end-to-end analytics solution.”²

The technical complexity and cost in resources, money, and time of achieving a more mature stage may prevent most publishers from achieving the advanced stage, forward-looking analytics in the near future.

² Supply Chain Digital Transformation Study, The Hackett Group, 2017

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INVENTORY AND SUPPLY CHAIN ASSESSMENT

To help publishers assess the current state of their baseline and make explicit what may have been traditionally implicit, The Consulting Garage developed a survey called the **Inventory Audit and Analysis or IA&A**. It contains twenty publishing specific inventory and supply chain factors and their descriptions in the form of questions to answer. The complete list is available at

<http://consultinggarage.com/for-publishers>

In an interview, the CEO of supply chain specialist JDA Software said,

“One monolithic supply chain is not going to work anymore.”³

Any publisher can diversify their supply chain approach to make their processes more agile and responsive. Many have already done so in response to the needs of their markets.

³ JDA Software partners with MIT to develop predictive supply chains, Internet of Business, March 1, 2018



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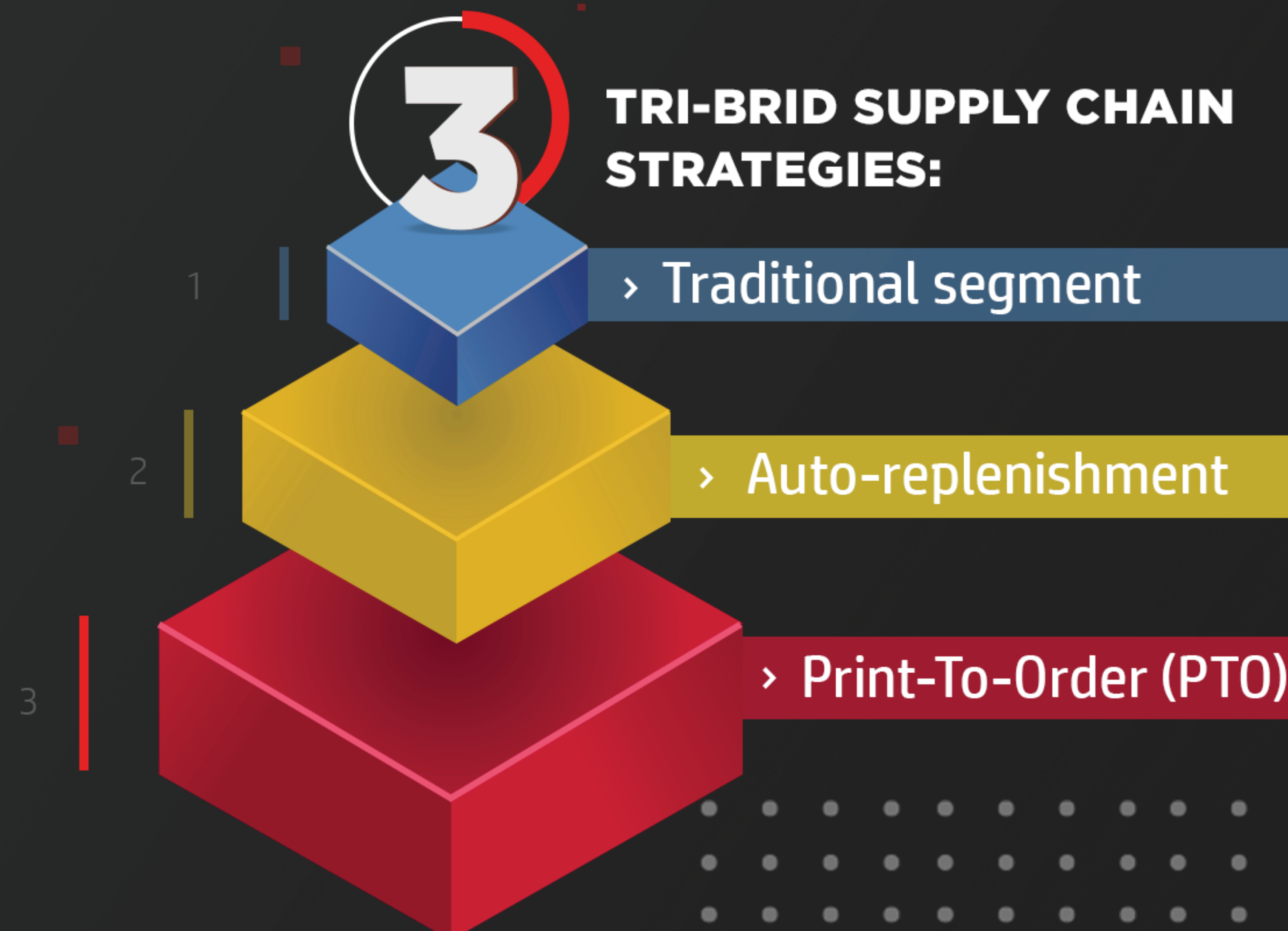
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THE TRI-BRID APPROACH TO INVENTORY MANAGEMENT

The Tri-brid⁴ approach to inventory management is polyolithic and not monolithic. It is a strategy that uses three unique supply chains to manage distinct segments of inventory. This strategy aims to better optimize the total inventory and enable immediate tangible benefits.



The segments are determined by the yearly unit sales of existing titles or the forecasts for new titles. The range of the segments reflects the estimated offset breakeven point or the amount of forecast uncertainty and service risk inherent in a title's history and forecast.

⁴Ibid

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THE THREE TRI-BRID SUPPLY CHAIN STRATEGIES

1
Traditional

The first Tri-brid supply chain strategy is **traditional**. It is used for the inventory segment that consists of the top tier of bestselling titles.

3
Print-To-Order (PTO)

The third and most potentially transformative supply chain strategy is **Print-To-Order (PTO)**. It is simply described as print to order, direct to consumer. To do this requires an integrated, end-to-end supply chain solution that connects the content from publishers to a printer that can produce the book at the point of need, in the quantity needed and, in the quality, desired for use, then ship directly to the end-user. This supply chain is zero-inventory, just-in-time book printing, and delivery.

2
Auto-replenishment

The second supply chain strategy in the Tri-brid⁵ is **auto-replenishment (AR)**. The titles included are those where the annual sales volume is low, from one hundred to nine hundred ninety-nine, and sales are unpredictable.

⁵Ibid

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VIABLE FIRST GENERATION PTO SUPPLY CHAIN

Going forward, publishers should strive to create their own PTO supply chain to enable a strategic advantage with benefits beyond owning the order and fulfillment of historical data: as a source for advanced analytics. Accumulating all possible data about who bought which titles will have enormous future value in a big data, advanced analytics world. Additionally, cloud-based applications and software as a service from third-party developers promise to bring PTO capabilities within the reach of many publishers soon.



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OPTIMAL NEXT GENERATION PTO SUPPLY CHAIN



Optimal next generation **Print-To-Order (PTO)** is a cloud-based ecosystem of technologies that are assembled and integrated for a comprehensive and scalable solution.

Let's take HP's Piazza for Publishing as an example of a newly available optimal PTO supply chain enabler.

- > It is a set of interlocking cloud-based services for publishers and printers that enable secure, integrated, automated, end-to-end workflow.
- > Piazza's ingestion engine will pre-flight content for digital print optimization of both cover files and book blocks.
- > The publisher assigns metadata by title, including bibliographic information, a quality profile, and production metadata such as ink density, paper, trim, and finishing.
- > The optimized content is stored in a cloud-based repository.
- > The repository is secure, searchable, and scalable, and provides the ability to group titles with a catalog management function.

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When

Piazza

is fully implemented, publishers will have an optimal PTO supply chain. The framework and workflow requirements for implementing this transition will require investments from both publishers and printers. Publishers must provide their title content and metadata to populate the repository. Titles designated for the PTO supply chain must conform to digital-friendly standard trim sizes, bindings, and paper choices. Publishers must also complete the application program interface (API) for Piazza to receive orders and customer delivery instructions and provide delivery confirmation updates.

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Figure 2 below recaps the contrasting general attributes of viable PTO supply chains versus optimal PTO supply chains. HP’s Piazza, combined with the right set of providers, will enable publishers to create an optimal PTO supply chain.

Figure 2: Viable versus Optimal PTO attribute table/Tim Cooper/
The Consulting Garage

Viable PTO Attributes	Optimal PTO Attributes
1. Orders originate from provider’s ecosystem	Orders originate from publisher’s ecosystem
2. Content resides in the provider’s repository	Content resides in publisher’s repository
3. The file is controlled by the provider	The file is controlled by the publisher
4. Print quality is determined by the provider	Quality standards embedded in the publisher’s metadata
5. Order fulfillment data is opaque for the publisher	Order fulfillment data is transparent and displayed for review
6. Limited global distribution within the corporate ecosystem	PTO is a global distribution and fulfillment platform
7. Single provider platform only	Standard platform for a portfolio of qualified providers

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CONCLUSIONS AND NEXT STEPS

Supply chain leaders are embracing digital transformation. While the long path to analytics maturity is daunting, publishers can take immediate and significant steps to improve supply chain performance. The most important is to move away from your traditional monolithic supply chain construct and adopt a Tri-brid strategy.

This is a challenging set of action steps for publishers, but the results promise to significantly improve business results, and lead to the next stages of analytic and supply chain maturity.

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Tim Cooper is a globally-recognized supply chain expert who’s worked with publishing and printing companies in the US, Canada, UK, Australia, China, and the Philippines. He has a Master of Arts in Organizational Management, and a BA in Philosophy. Tim is the founder and principal of the Consulting Garage, which is now in its tenth year.

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