HYPER GIANT

MACHINE INTELLIGENCE

AND THE MANY FACETS OF SOLUTION-BASED STRATEGY
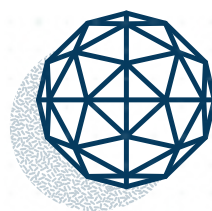
BY **ROSS A. MCINTYRE**, VP OF STRATEGY
AND **GREG CARLEY**, VP OF PRODUCT INNOVATION

Typically, one of many facets of product strategy are employed to create the right product to solve an established business problem. The exploration of each element is undertaken utilizing a user-centric approach, proven to be table stakes for any design process . One element, several, or all of those facets can be used singularly or in combination to define digital product solutions that creatively solve an array of business challenges faced by companies today.

At this point in history, it's foolish to create new digital products that don't leverage machine intelligence (MI). Familiarizing oneself with the tapestry of technologies that comprise MI is part of a product strategist's due diligence for any project. Because if the approach to a new digital product can force clients to (re)visit the cleanliness of their data (i.e., data hygiene), their database structure, and the existence (or absence) of a Machine Intelligence strategy, then the engagement has already added value on more than one front.

NEW SOLUTION IDENTIFICATION:
I HAVEN'T SEEN YOU HERE BEFORE

New Solution Identification is a set of processes that introduces, within a business, a product that is new to a previous line of products or, on the market, a product that provides a new type of satisfaction. Three alternatives emerge from the above:

- **Improvement/Modification:** the new product strategy is an offensive one.
- **Imitation:** serves as a defensive strategy.
- **Innovation:** meets new needs and applies competitive pressures on existing products.

A new product strategy is difficult to implement if a new product *development system* does not exist within the company. For this, several components of the system should be assessed:

- Corporate support for development of new products (*i.e., an organizational drive towards creation supported by leadership*).
- Overall favorable organizational attitudes towards creativity (*i.e. a culture of innovation or invention*).
- The screening method and evaluation process for new ideas.

The desired outcome is, generally, increased profitability and/or market share. MI can broaden the value of most new products by introducing data needs as an additional pillar of User Experience (i.e., balancing business needs with user **and** data needs). If you cannot immediately derive value out of the data sets being collected, then you must consider other requirements for your users. How can you encourage more robust data sharing? Conveniently, MI can make use of both the explicit and implicit capture of data.

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SOLUTION ARCHITECTURE:
IF YOU BUILD IT, WILL THEY COME?

The Architecture Strategy deals with the degree of a product's standardization. For this, there are several strategic options for an organization to choose from:

- **Standard Product:** to increase the company's economies of scale.
- **Customized Product:** utilize design flexibility to compete against mass producers.
- **Product with Modifications:** to combine the benefits of a standard and customized product.

Close analysis of product/market perspectives and environmental changes is necessary, especially those focused on technology. Here, the desired results are again increases in market share and profit with additional attention given to product or corporate growth. In addition, the third strategic option specifically allows the company to keep close contact with the product users and the market as a whole in order to benefit from iterative development.

To expand upon the aforementioned consideration for data hygiene, responsible development should lead towards constructing digital products in such a way that the inclusion of machine intelligence in a future phase or iteration is simple. A client may not need MI applications immediately or may require some housecleaning before introducing MI, but just as most contemporary digital experiences have some aspect of modularity, new digital products should have the right hangers and inputs for MI.

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SOLUTION ECOSYSTEM:
WHO WANTS TO BE A GESTALT?

The Solution Ecosystem Strategy is oriented towards a company's product mix and determined by considering the mission of the business or business unit.

• **Single Solution:** directed towards gaining a proportionate savings in costs through increased production levels (i.e. economies of scale) with a focus on developing specialized, often bespoke, solutions. The client company must stay up-to-date on the product or solution and become the technology leader to avoid obsolescence.

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- **Multiple Solutions:** to mitigate the risk of potential obsolescence for a single product through the addition of other complementary products within the portfolio. More than one product relates to another by sharing adjacent, and potentially complementary, functionalities, but the strategy stops short of the interoperability that defines the System of Solutions approach.

- **System of Solutions:** to increase customer dependence, as well as prevent competitors from moving into the market. The company must have a keen understanding of customer needs and the ways solutions are utilized. Interoperability between the digital product set is what defines a System of Solutions.

SOLUTION VALUE:
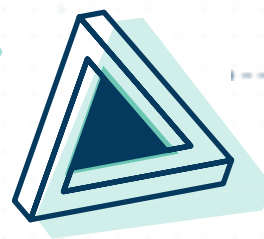## I KNOW YOU ARE, BUT WHAT AM I?

The Solution Value Strategy is user-focused and necessitates delivering on promises made for the solution, be it a product or service, promises including quality, customer service, and exceeding expectations – all directed towards seeking total customer satisfaction. This strategy ultimately means:

- Striving for excellence to meet user expectations and examining user value perspectives.

- Training employees and distributors to deliver on promises by designing products that meet customer quality, service, and time requirements.

- Enhancing customer satisfaction, which leads to customer loyalty and, subsequently, higher market share.

If you don't already know what differentiates your product (i.e., makes it special), then you may want to pause and ask yourself: Why would customers use this? What value can they derive? A common application of Machine Intelligence is to reveal previously unexplored connections by providing users with a new vantage point from which to view their data. If you are collecting data from your users (and, especially, if you are explicitly asking them to do so), then you must clearly illustrate the value that they can derive by sharing that information.

SOLUTION DIVERSIFICATION:
SPARE ANY CHANGE?

Solution Diversification more closer alings to innovation than invention. Projects are oriented towards developing products and markets through:

- **Concentric Diversification:** products have a technological or marketing relationship to existing products.
- **Horizontal Diversification:** unrelated products sold to the same users.
- **Conglomerate Diversification:** for entirely new, unrelated products.

In turn, these diversification strategies respond to an organization's desire for:

- **Growth:** when current products/markets have reached maturity;
- **Stability:** by spreading the risk of fluctuations in earnings;
- **Security:** when the company faces (or fears) a parity challenge from one of its major customers;
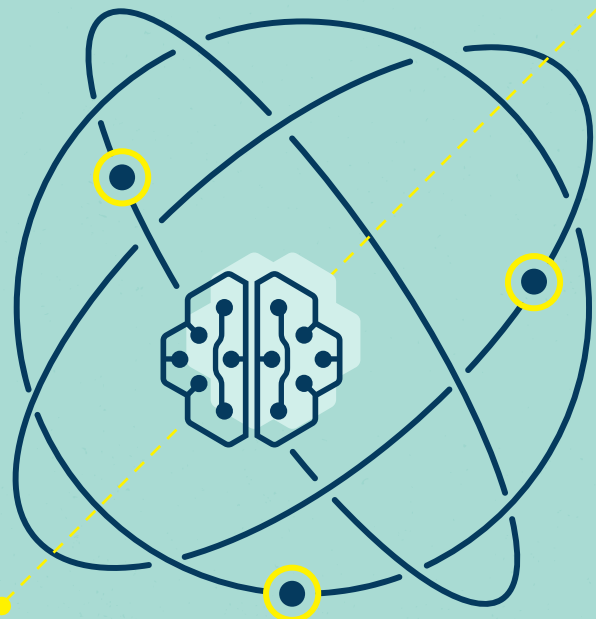- **Credibility:** to have more weight in capital markets.

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Reducing these risks requires examination of the following initiatives:

• Diversify activities if /market opportunities are limited.
• Understand the area(s) of diversification.
• Adequately support new and existing products.
• Understand the ramifications of diversification on currently available solutions.

Flexibility can lead to increased sales and profitability. Oftentimes, the Solution Ecosystem and Solution Diversification strategies share characteristics, but there are clear differences when it comes to their expected product metrics and intentions. Diversification is often oriented towards adding new and differentiating features to one or more of a company's existing products. This approach is often innovative, with new products and solutions frequently being alternatives to existing products or exhibiting remixes of features, functionalities, and differentiating traits.

One key path to this type of innovation is through Machine Intelligence; it's how you can make an existing solution produce more value. Not to mention that, on the business side, MI allows companies to more effectively forecast diversification's potential impacts by leveraging historical data.

SOLUTION POSITIONING:
INSERT PRODUCT A INTO TAB B

Whether the goal is differentiation or increased visibility and affinity, the purpose of Solution Positioning is to find the place in the market where the brand will be received favorably when compared to its competitors. Thus, it is important to use design and promotion to position an individual product as uniquely suited to a particular, well-segmented audience. This will lead to attaining the business's end goals of short-term success, satisfying the needs of specific segments, and increasing brand favorability.

Doing It Right the Second Time
Reevaluating (and possibly revamping) a product's current positioning and marketing mix may be appropriate for a company. The goals, in this case, may be:

- Increased or augmented product/solution lifespan
- Positioning correction
- Augmented adoption

If the Solution Positioning strategy is directed towards existing customers, then repositioning (along with an increase in sales growth and profitability) is sought through the promotion of more varied product use cases. To reach new users, the product must be presented with a different twist to those people who have not been favorably inclined towards it. That way, the company might trigger an enlargement of its overall market, thus putting the product on a growth route leading to increased profitability. In doing so, care should be taken to ensure that (while enticing new customers) the brand is not alienating its current ones.
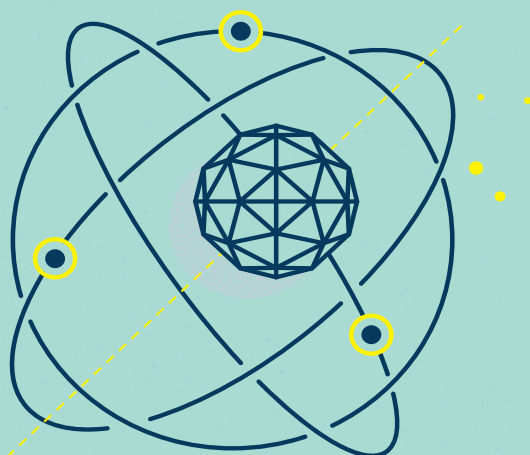
Presenting new product use cases requires searching for latent uses of the product (if there are any). This is what ultimately drives towards an increase in sales, market share, and profitability. Although not all products have latent uses, there are products that may be used for purposes not originally intended.

The need for Solution Positioning is commonplace nowadays. Several years ago, there was a drive to create mobile applications even when one was uncertain as to their value. This fervor and zeal led some companies to introduce unnecessary products that don't solve real business problems. Similarly, today's trend revolves around adding Machine Intelligence to every product made. The introduction or application of MI can definitely provide the aforementioned product "twist," but if it isn't returning value to both the users and the business, then it might not be worth the development effort. Try again.

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SOLUTION OVERLAP:
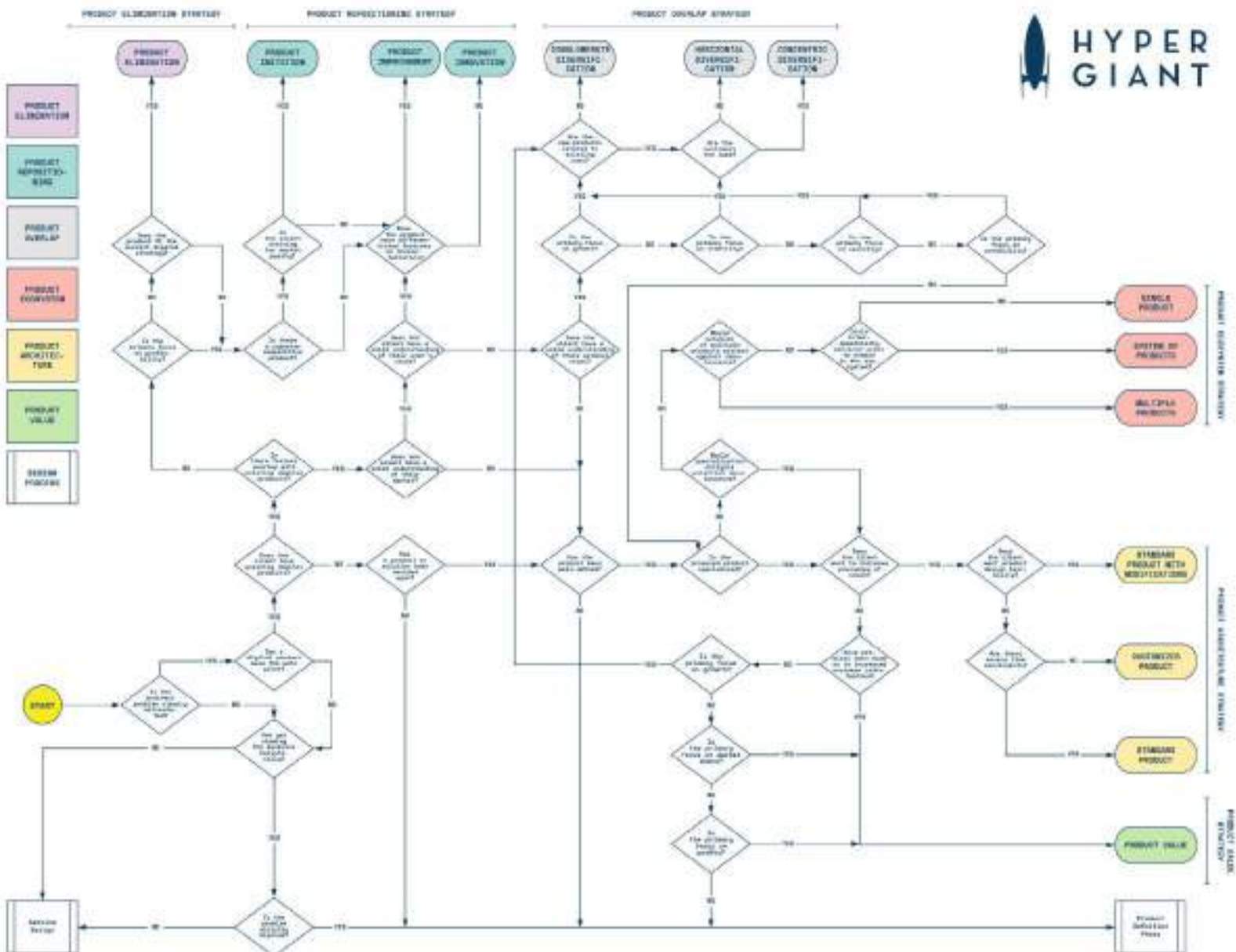## EVERYONE'S GOT A VENN DIAGRAM, THIS IS OURS

There are various dangers associated with fostering internecine competition between products but the Solution Overlap strategy should be investigated if the key performance indicator (KPI) is growth and/or market share.

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This chart does not replace a human strategist. Just like machine intelligence, it enhances the work that people do within its intended discipline.

PRODUCT STRATEGY DECISION TREE

The goals associated with such a strategy could be to attract more customers to the product, thereby increasing the overall market; to work at full capacity and spread overhead; to sell to competitors; or to realize economies of scale and cost reduction. Either way, these considerations must be weighed:

- A unique marketing organization or initiative must be applied to each product or solution.
- To avoid customer confusion and deleterious effects on sales, niche identification is critical.
- Superior products or solutions should always be the beneficiary of business-based Darwinism.

Introducing a new brand is difficult and introducing a sub-brand is even harder. One must be weary of the brands' cannibalizing one another like some kind of corporate ouroboros.

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SOLUTION ELIMINATION:
PRUNING IS NOT JUST FOR GERIATRICS ANYMORE

Solution Elimination cuts the product portfolio composition of a company's business unit by winnowing the products within a line or through total divestment of a business or division. A company may make this move to:

- Eliminate products due to thin profit margins.
- Eliminate products who do not fit the overall business strategy.
- Eliminate products with dubious future performance metrics.
- Fashion the ideal product mix thereby balancing the business.

Elimination is easy, but a detailed analysis must be performed to determine the causes of current issues, the alternatives (other than elimination) that may solve those problems (i.e., possible improvements in the marketing mix), and the repercussions of elimination on remaining products or solutions. In the short run, cost savings from production and support efforts and, in some cases, an improved return on investment (ROI) can be expected. In the long run, the sales of remaining products may increase due to a greater organizational focus on those that remain.

When making the decision as to whether Product Elimination is the right strategy for the organization at hand, it may be worthwhile to apply Machine Intelligence to its financials. After all, understanding the shape of impact from the digital product across its entire lifecycle is critical to making this choice. Perhaps, there are benefits derived from the digital product that are difficult to see through a traditional financial lens.

CONCLUSION

Care, feeding, and pruning of your digital products, solutions, or ecosystem as a whole is a reality that we will continue to face. We must regularly examine our offerings and ensure their continued relevance. The application of Machine Intelligence can be a way to innovate, extend product lifespan, and offer new value to your customers, but it can rarely serve as the lone differentiator – especially as MI (like user-centric design) becomes de rigueur.

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Ross has worked in the digital product sphere for over a decade, following a 20-year career in the entertainment industry. He started as a QA engineer at Huge in Brooklyn, NY, then was swiftly promoted to product management. Upon opening its San Francisco office in 2015, Ross was tapped to lead, manage, and grow the West Coast product management team. From there, he joined Chaotic Moon as Director of Product Strategy and took over as design director and discipline lead in 2016. He has been a part of the Hypergiant team since Day 0 and is committed to bringing AI enlightenment and Intelligent Experiences to a broad swath of industries.
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