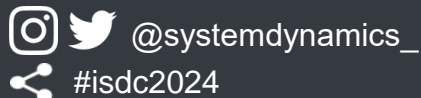




Navigating Complexity: Enhancing Strategic Thinking for Dynamic Environments

2024 INTERNATIONAL SYSTEM DYNAMICS CONFERENCE
PRACTITIONER APPLICATION
THE CASE OF ACME COMPANY

0:00-0:30



THE 42ND INTERNATIONAL SYSTEM DYNAMICS CONFERENCE
Bergen, Norway and Virtually



Introduction

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Introduction

- The issues facing organizations nowadays are increasingly complex. The assumptions under which strategies are designed do not remain constant, so decision makers require tools to evaluate strategies' viability in a dynamic context.
- In such a context, the intuition supporting decision-making process is no longer enough. The way of thinking requires a change of approach and new tools that enable the decision-makers:
 - Reframe mental models of how the company operates and the market in which it compete.
 - Make structure-behavior relationship conscious: how organization responds to strategies.
 - Formulate more effective decision-making strategies and policies visualizing the impact of decisions in the long term, anticipating risks and taking advantage of opportunities.
- This document presents the results of a Systemic and Prospective Planning exercise, a practitioner application carried out in a Mexican Company. The methodological approach integrated disciplines of strategic planning, strategic foresight, and systems dynamics, to assist the organization in rethinking its strategy by 2030.

2:00-3:30



Problem Statement

The company ACME₁ is currently at a decision point where it must define the market it should serve given the reconfiguration of companies competing in the sector. The trend suggests that large players are absorbing smaller ones, and it's time to decide whether it's worth strengthening capabilities to serve the Mexican market, given the 50 years of experience and favorable reputation that has been built in said market.

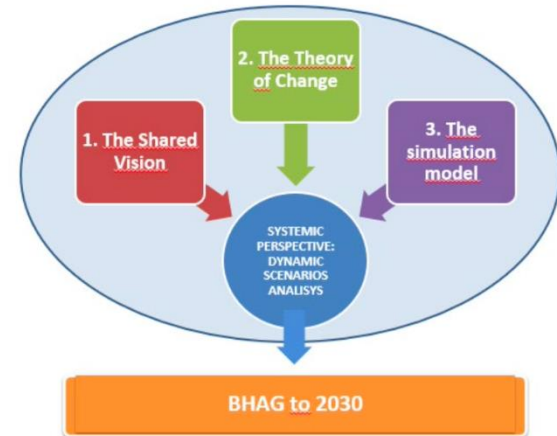
It is in this context where a consulting process is perceived as relevant, which could provide: 1) knowledge of the organization and the arena in which it competes through an internal and external analysis, 2) future trends that could impact the industry - using strategic foresight tools, and 3) the identification of the theory of change, strategic architecture, and its future development using Systems Dynamics and Scenario Modeling, to arrive at the definition of a Big, Hairy, Audacious Goal towards 2030.

2:00-3:30

Methodological approach



- To get to the definition of a Big Hairy Audacious Goal (BHAG) four phases were carried out, each one requiring consultation with key stakeholders in the process, based on the premise that success of any project depends on the ownership that stakeholders developing alongside participating in the design process itself.
- Information provided by the organization as well as support information regarding trends and factors to understand the market and its competitors were used.
- The consulting process took place along 5 months. The results presented next are organized according to the stages described in the methodology.
- The present document follows each one of the presented phases.



2:00-3:30



1. Shared Vision

The definition of the strategic route considered the discovering of the shared vision for the future of the organization. In words of Peter Senge:

“A shared vision is not an idea. (...) It is a force in the hearts of people, a force of remarkable power. It may be inspired by an idea, but if it is compelling enough to gain the support of more than one person, it ceases to be an abstraction. It is tangible. People begin to see it as if it existed. Few human forces are as powerful as a shared vision”

For this purpose, two workshops were organized for a Future and Strategic Reflection. At the first one a shared vision was established, and during the second one strategies were defined to realize this vision.

Members of the board of directors, as well as executives and staff of the organization, participated in these workshops through a brainstorming session, the visualization of their organization by 2030.

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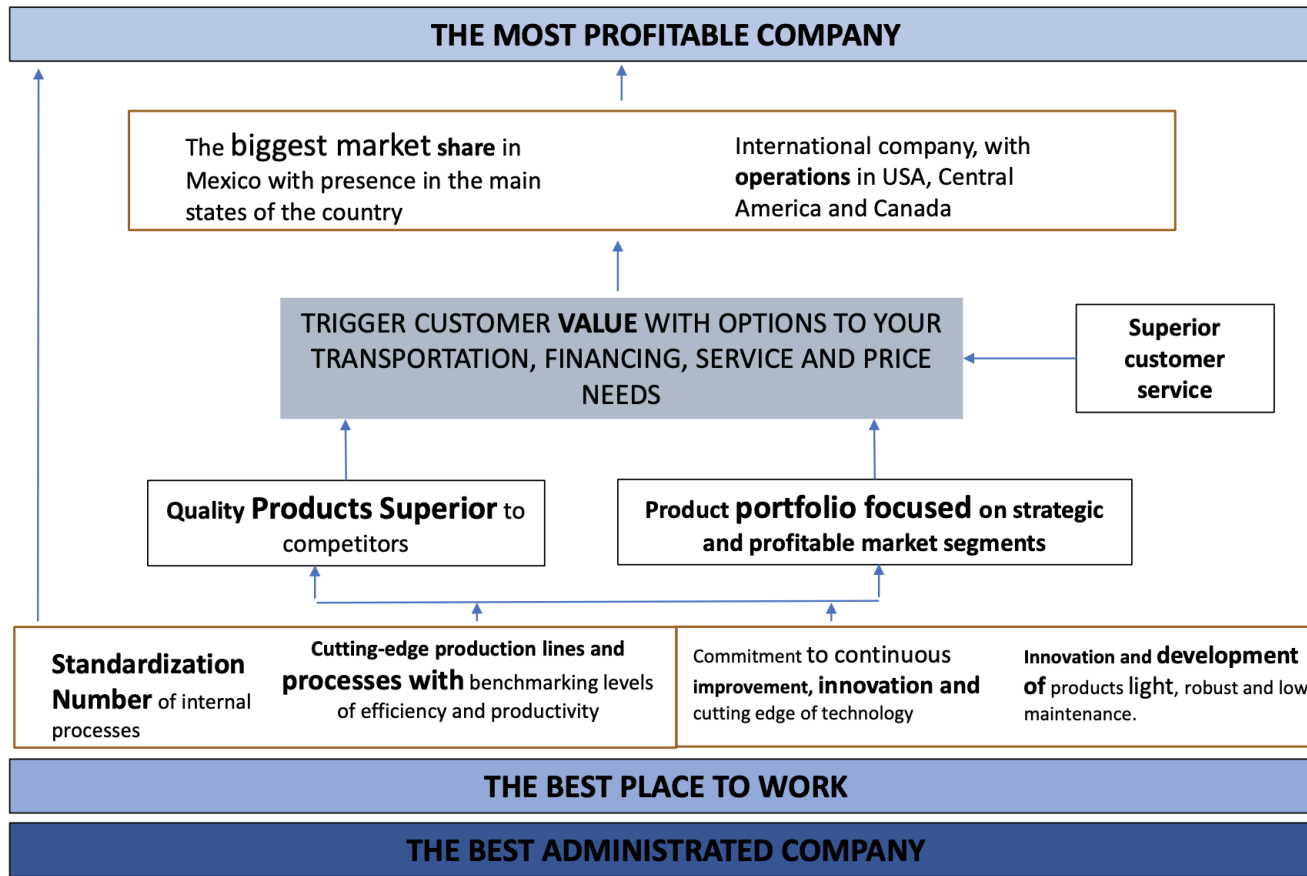
1. Shared Vision

- To identify consensus on the most significant ones, criteria such as importance to the organization, governance over its achievement, and its viability within the established timeframe were utilized, considering challenges those whose outcomes would take longer to be observed compared to those with more immediate effects.



	CHALLENGES	IMMEDIATE
IMPORTANCE	2. ACME is recognized for having the range of products to serve profitable strategic segments	7. ACME is number 1 in innovation and development of light, robust and low maintenance products.
	9. It is a success story due to its standardization of internal processes	21. ACME is admired for being the best managed and profitable company in the sector
	12. We have the largest market share in Mexico with presence in the main states of the country	13. Recognized for generating value for the client with options for their transportation, financing, service and price needs
	18. It is an international company with operations in the USA, Central America and Canada	19. Is committed to continuous improvement, innovation and the cutting edge of technology
	GOVERNANCE	

STRATEGIC ARCHITECTURE FOR THE SHARED VISION TOWARDS 2030



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1. Shared Vision

- The Strategic Architecture model highlights the pillars supporting change: company management and the flourishing of individuals working within the organization. Through effective and efficient management and by fostering a work environment where people collaborating within it develop professionally and personally, the commitment of each of them to sustain the change and required innovation for transformation will be achieved.
- To achieve the desired positioning, it is necessary to generate value for the customer by offering a portfolio of superior quality products according to their specific options and needs. This demands superior customer attention, with a specialized commercial staff focused on their needs.
- When the processes of the operational, commercial, and innovation areas are articulated with a highly focused administrative management, market penetration in national and international markets will be achieved, reflected in higher levels of profitability.



2:00-3:30



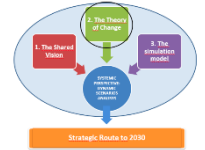
2. Theory of change

- The integration of the strategic architecture was crucial in building consensus on the desirable future vision for the organization. The objective of the second workshop was to identify the strategies to achieve this vision. A total of 54 strategies were identified, and the impact of each desirable characteristic was evaluated in a prioritization exercise.
- In a traditional strategic planning exercise, the next step would be to translate the strategies into operational planning. However, the dynamic complexity prevalent in this business arena necessitates a visualization of the theory of change, which would allow the identification of key transformation variables and potential feedback loops that could not be observed in a traditional linear visualization.
- The conceptualization of the Shared Vision was represented in a causal diagram, where starting from the mapping of the current situation, the main characteristics of the Vision were incorporated: benchmark efficiency, commercial strategy, new marketing channels, and financial indicators.



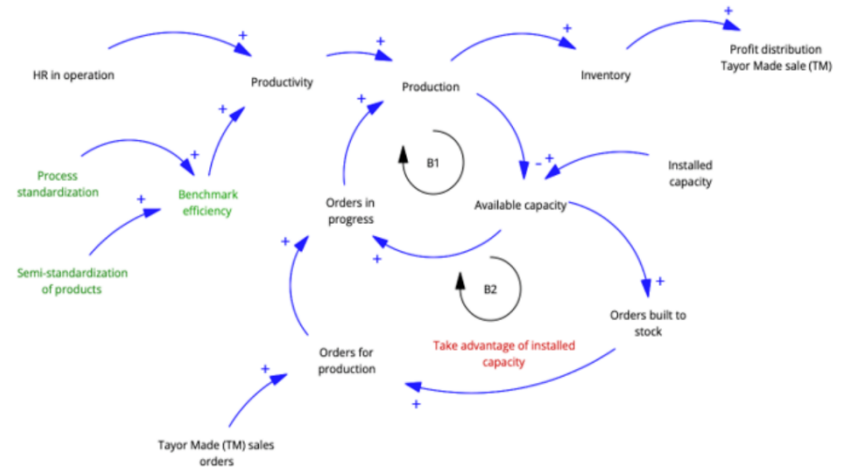
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2. Theory of change



Production Dynamics

- Productivity is a function of Human Resources and Efficiency, determining how many units are produced per unit of time.
- Capacity is defined by the line's capacity, and orders mainly following the Taylor Made scheme enter production. Cycle B2 reflects how additional Built to Stock orders are sporadically sent to capitalize on installed capacity.
- Regarding the desired characteristics of the Vision, firstly, we aim to achieve world-class efficiency. In this sense, as seen in the diagram, standardization of processes and semi-standardization of products will have a significant impact on productivity. This will be directly reflected in production capacity, specifically in the throughput of production lines.

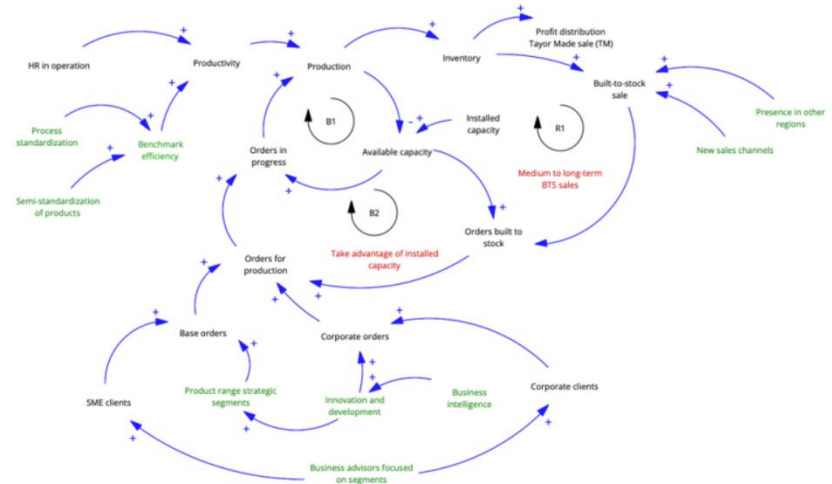




2. Theory of change

Comercial Dynamics

- The ad hoc commercial strategy refers to the push needed to serve not only the market of large clients or institutions but also small and medium-sized enterprises.
- Each of these markets requires personalized attention and a range of products tailored to their needs. In the case of institutions, innovation will be the key to maintaining and increasing their orders; in the second case, this segment seeks a range of products that meet functionality and price requirements, which will also be impacted by innovation and development processes.
- Regarding new sales channels and expansion, it is envisaged that market growth and market share require channels that accelerate product penetration. This is the case with sales through Distributors, Agencies, and Online channels, attracting customers whose products are standard and expect immediate response times.

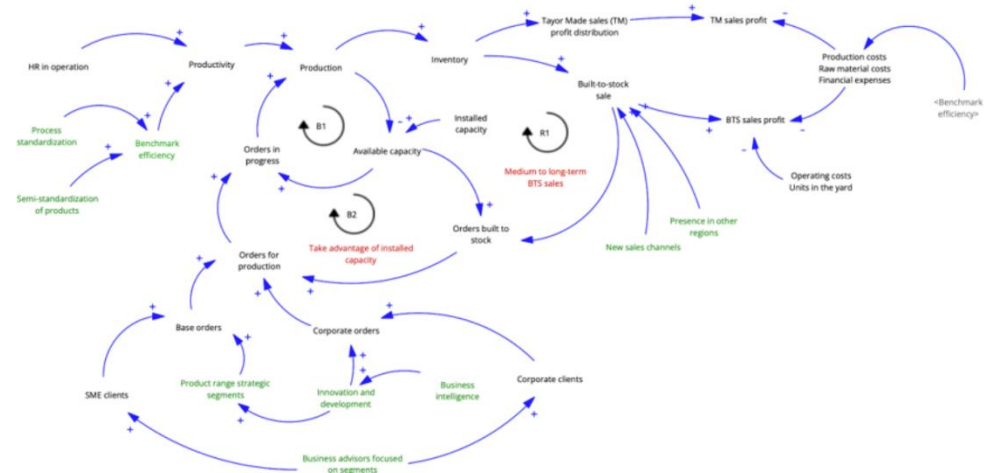




2. Theory of change

Financial Dynamics

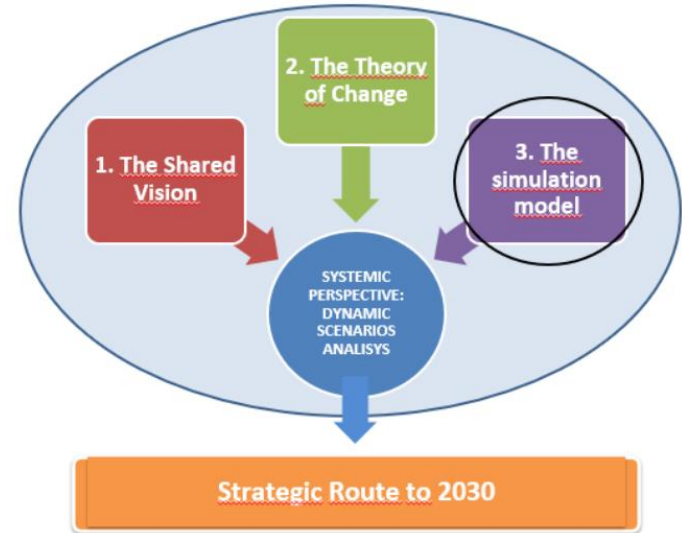
- About financial indicators, we can observe that if a higher profit and therefore profitability is sought, the most direct path is saving on raw material and operating expenses.
- Making strategic purchases will have a significant impact as raw material costs represent between 70 and 80% of the total price.



3. The simulation model

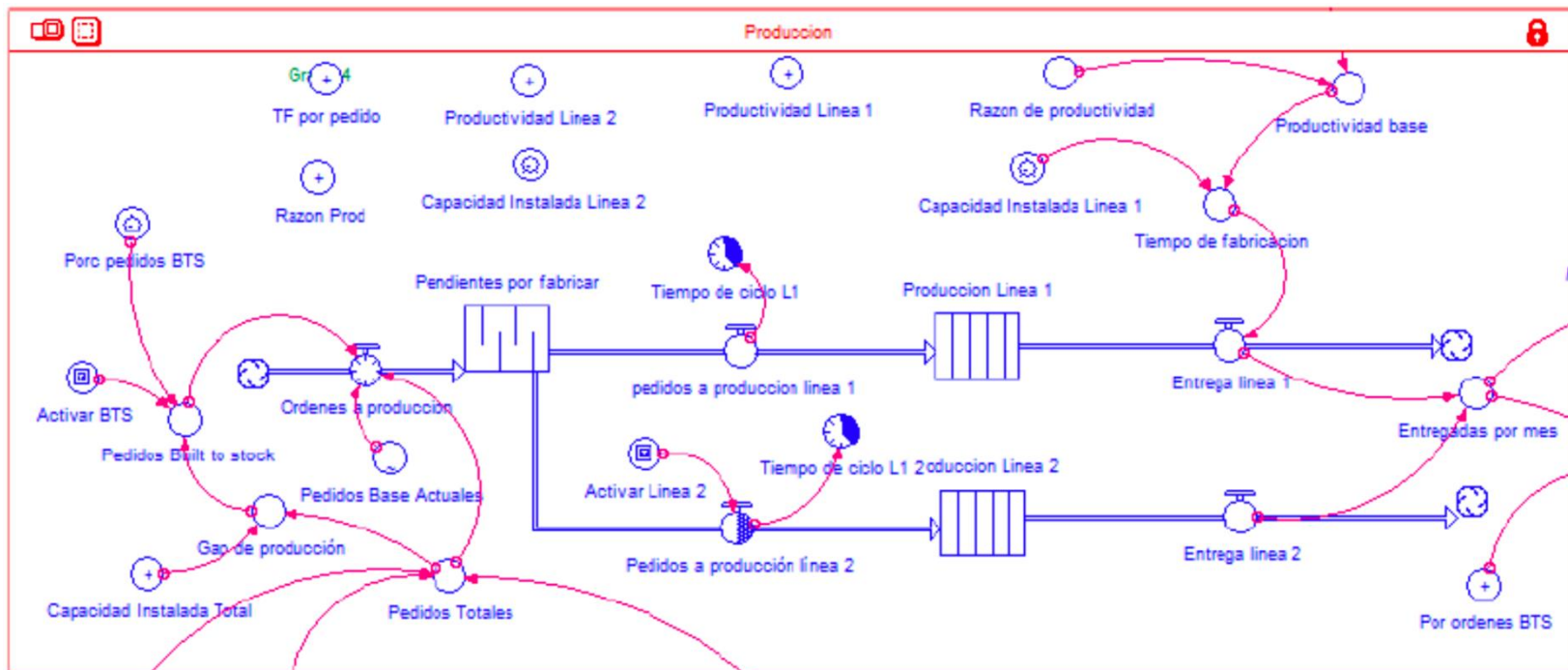


- System dynamics is based on the premise that dynamic systems change due to feedback loops that occur among their elements. The causal diagram is therefore the representation of the dynamic hypothesis of the system, which will be tested using a simulation model.
- The strategic variables identified in the theory of change were mapped, and the variables were parameterized based on the data provided by the company.
- The next slide presents an example of the section of the model corresponding to the operations sector1, where orders arriving for production are observed and waiting in the first rectangle, which represents the waiting queue. The production lines are represented as conveyors, each with specific capacity and transit time.



2:00-3:30

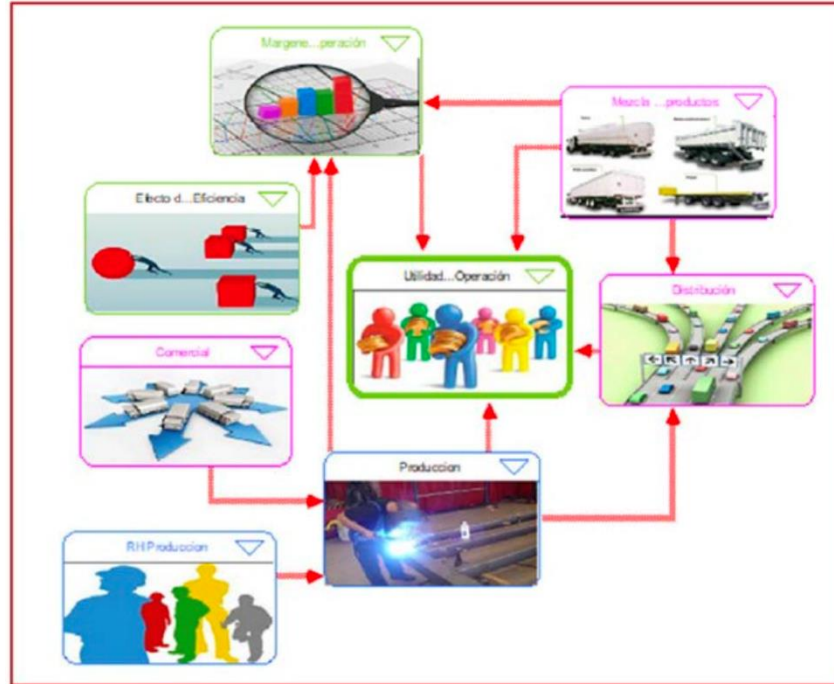
3. The simulation model



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3. The simulation model

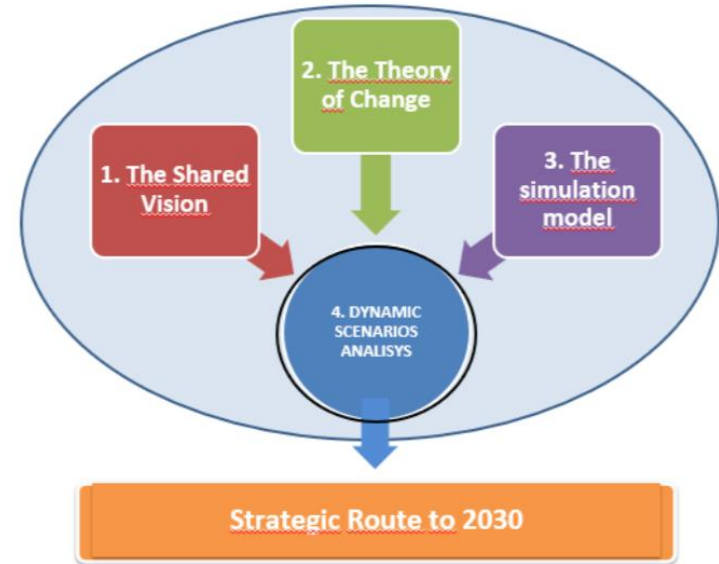


The design of the full model integrates each of the sectors connected through their critical variables. The Figure shows the integration of subsystems as presented in the simulator.

4. Dynamic Scenarios Analysis



- A third strategic reflection workshop took place to define future hypotheses for the key elements of ACME's Vision 2030.
- Using a Strategic Foresight technique for scenario design, the logic of these scenarios was defined considering World-Class Efficiency and Commercialization as central axes, resulting in four possible scenarios for ACME's future by 2030.
- These four scenarios were modeled with the premises of the theory of change, allowing for plotting the strategic course to achieve the most desired scenario.



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4. Dynamic Scenarios Analysis

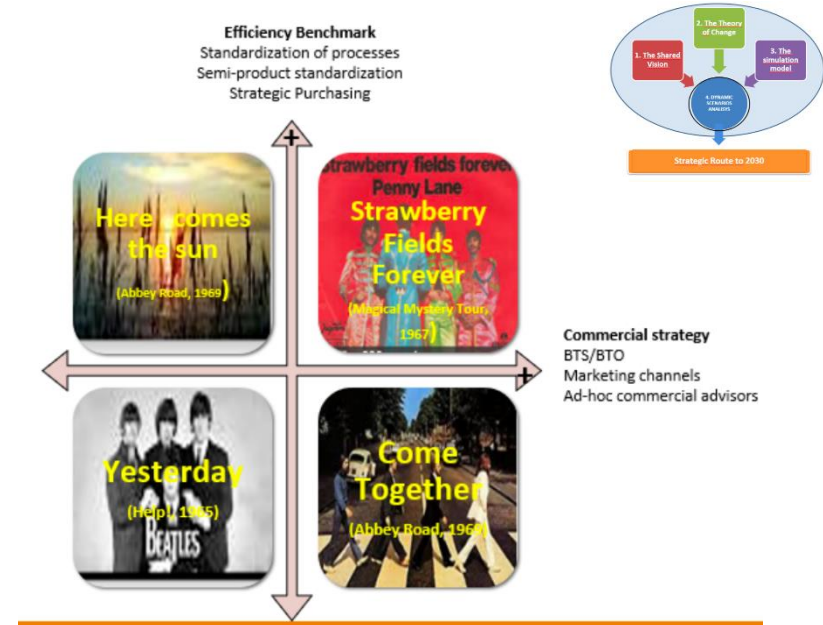


	STRATEGIC VARIABLES	Future Vectors	
		Vertical Axis	Horizontal Axis
1	Innovation and Development	X	
2	Operational Efficiency	X	
3	Commercial area capabilities		X
4	Strategic Provisioning	X	
5	Market Segmentation		X

In the scenario design technique, it is very useful to provide a mental image of what each scenario's central idea represents using allegories in the definition of their names.

For this case, songs by the Beatles were chosen, whose lyrics evoke the futures that are intended to be visualized.

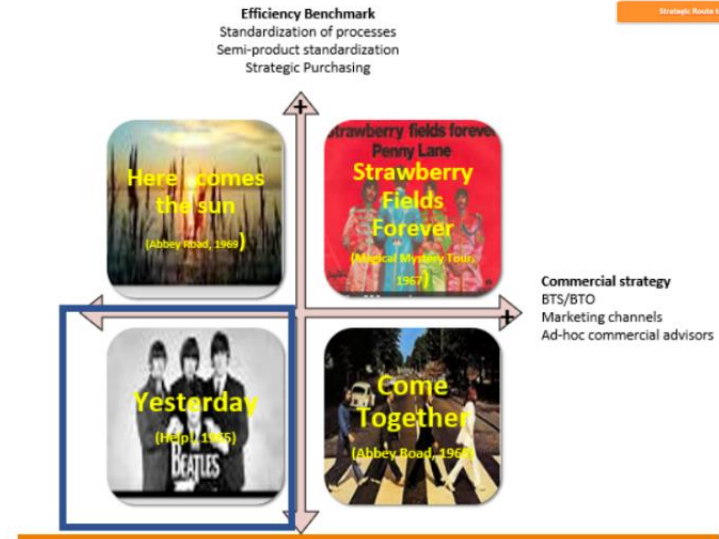
Next slides present Scenario Yesterday, developed as an example.



E1 *Yesterday* Assumptions

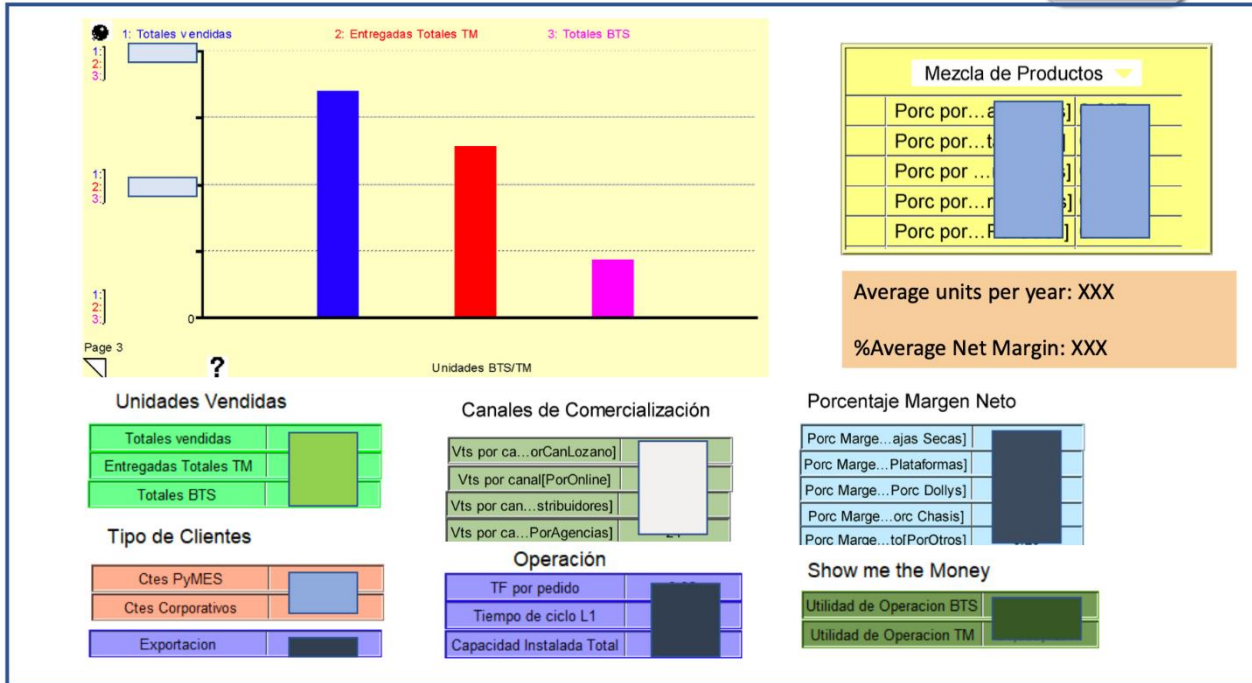


- The installed capacity of X units is reached on both lines.
- ACME is mainly produced (X% approx.).
- There is a use of X% of the available line capacities for BTS.
- The Efficiency Strategy Benchmark started with a moderate boost in the first 4 years, which has allowed the proportion of manufacturing expenses to be reduced by X%.
- With this same impulse, the strategic purchasing strategy allows a decrease of around 10% in the relative proportion of raw material costs in the first four years.
- The commercial strategy focuses on attracting SME clients, which has resulted in an improvement in the order balance. However, Business continues to operate as usual, with a 60-40 mix between large and small clients.
- The development of marketing channels is promoted considering Distributors, Agencies and an incipient Online sale, however half of the sales are made *on site*.





E1 Yesterday Results



Results are hidden to maintain confidentiality.

2:00-3:30

E1 Yesterday Results



- Yesterday assumes that by 2030, production at ACME is carried out on two lines with low levels of standardization, with a marginal increase in production capacity, reaching the installed capacity of X units per line.
- Modeling the "Yesterday" scenario results in reaching X units sold by 2030, with an annual average of XX, of which 75% are delivered in the BTO system and 25% in BTS.
- In the last month of simulation, a total of X units are being marketed. Analyzing these results, the company cannot continue operating with the same business model.
- The market share reached is not enough to achieve brand positioning to access new markets.
- In summary, you can expect different results while doing the same.



4. Dynamic Scenarios Analysis – Key Insights



- This exercise of future visualization helped decision-makers identify that it is indeed possible to achieve their shared vision when working systematically on key strategies both in the production system operation and in the market focus strategy.
- In the best-case scenario, their market share would place them in the 5th position on the table, below the major industry competitors, but with sufficient profits to continue investing in both production capacities and human capital.
- The morale in the team is clear; there is a future to strive for to take the company to the next level, without being absorbed by the major international players.

2:00-3:30



Big Hairy Audacious Goal

ACME AT 2030

We are a company with ability to adapt quickly to changes given our operational excellence;

We are the best place to work since our organizational values and culture assume that the only way to sustain change and evolve is through shared commitment with our collaborators.

We are the most recognized national brand in México, our reputation transcends borders.

2:00-3:30



Main Contributions

- The Systemic Planning process carried out in the organization allowed for the collaborative construction of the vision with solid foundations, with full recognition of the organization's strengths and weaknesses, as well as the situation in which the competitive arena context is found.
- The theory of change and dynamic scenarios were essential for envisioning different futures, not in an effort of prediction, but to contribute to the visualization of the major forces that can drive the organization.
- This systemic and prospective exercise has been very useful for defining the strategic direction, which will require very precise operational planning, with action plans grounded and co-designed among the areas, so that evolution can occur in sync, avoiding the risks outlined in the scenarios and capitalizing on synergies.
- In this way, the strategies will be sustainable and realistic, leading the company to the envisioned strategic positioning by 2030.
- Another significant contribution of this intervention resulted from combining methodological approaches in a harmonious way through workshops that provided not only elements for design but also a sense of ownership of the shared future vision.

2:00-3:30



References

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