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PIMS® Predictive Analytics and Strategic Benchmarking 4.0

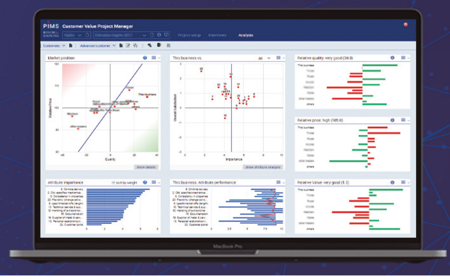
Evidence based strategy quantification, strategy validation, strategy navigation.

Soon available as a Service: PIMSaaS®.

#PIMS® predictive analytics #Data driven analysis #AI #Evidence based strategy development #Process improvement #Stimulus for a change #BigData #Strategy quantification #Leveraging +20’000 years of real business experience #Company growth #2000+ companies #Portfolio strategy #+12’000 businesses #Strategy validation #Cost benchmarks #New ventures#Private Equity Investments #PIMSaaS #Merger & Acquisitions #Cross sectional #Laws of the marketplace

STRATEGIC BENCHMARKING

Evidence based strategy quantification, strategy validation, strategy navigation.



History and objective

The Profit Impact of Market Strategy (PIMS®) programme is an evidence-based strategy development solution that enables businesses to quantify their profit potential and to evaluate the effects of their strategy and actions on sustainable success. The programme yields comprehensive analytical insights into quintessential business questions such as:

The programme yields comprehensive analytical insights into quintessential business questions such as:

- What level of profitability can be expected given your current and planned strategic profile?
- What are your greatest strategic and operational strengths and weaknesses?
- What is the optimal mix of advertising, promotion, sales force and innovation effort?
- Where must you concentrate your forces to maximise future success?

In addition, PIMS®:

- Aids investment/divestment decisions for a portfolio of businesses, by evaluating actual versus expected performance levels;
- Forms part of the M&A screening process and due diligence, by quantifying the acquisition worth including potential synergies;
- Enables start-ups to optimise their launch strategy, via market penetration and value proposition models, and
- Helps quantification of alternative scenarios, by linking market dynamics to bottom-line success.

Initiated in the mid-1960s at General Electric (GE), the PIMS® programme started life as a research project. GE's objective was to research the database of its own hugely diverse portfolio (from jet engines to television to lighting to polycarbonate plastics to financial services) to identify fundamental factors that would have an impact on economic success regardless of the product, and thus, to pinpoint businesses with a strong success potential, to then invest in. Between 1972-1976, the programme was conducted by the Marketing Sciences Institute at the Harvard Business School, which extended the research to other companies. Today, the programme forms the core of the Strategy Intelligence Programme at PIMS Associates Ltd. The strategy database contains time series data on over 500 metrics from more than 4,500 Strategic Business Units (SBUs) worldwide, making it the world's leading empirical research on strategic management. Table 1 below showcases a few real-world application of the programme:

Industry	Objective	PIMS Solutions	Results
FMCG	Maximise growth and profit potential	» Boost the qualiy offering by creating a premium brand » Refocus advertising & promotion towards marketing and quality brand » Train the sales force in selling a premium product	» Significant improvement in sales and margins » Vastly increased brand recognition
Pharmaceutical	Validate strategy of launch-ing new diagnostic product at significant discount to wipe out competition	» Avoid price wars as incumbents would follow (even at a loss) and hinder significant share penetration » Launch at 5% discount and use the extra margin to build the sales force	» Extra sales force investment has raised customers awareness of the entire portfolio and helped boost the sales of other products
Construction	Expand into a new country through acquisition	» Reject all acquisition targets, based on their poor strategic potential » Enter the market with greenfield investment	» Successful greenfield investment and rapid market penetration

The PIMS approach to strategy development is unique as the solutions are based on 25,000 years of real business experience. The programme yields clear answers to key strategic questions that are tailored to the profile of a specific business and can be obtained with a swift turnaround time, which is paramount in the rapidly changing business environment. The derived strategy triggers a commitment to change as the results are scientific and objective. Ultimately, the PIMS® approach facilitates an evidence-based approach to management, which will always beat wishful thinking.

> ”
>
> Thanks to PIMS, for the first time we have a clear picture of our perceived value position relative to our closest competitors, our core strengths and key improvement areas. This will enable us to better align our offering with the customer needs.
>
> National Sales Manager, Global automotive company, Germany

Strategic Business Unit

The performance of a company is typically the aggregation of the performance of its diverse Strategic Business Units (SBUs). Using the company as the unit of performance evaluation is essential for legal reporting and serving the financial stakeholders. However, in strategy development this is suboptimal, as the results are too aggregated, resulting in an inability to align to customer needs, insufficient variety and, ultimately, missed opportunities for growth and profit. Defining performance units with the right level of granularity is paramount in ensuring a company fully develops its true potential.

PIMS proves that the drivers of business success operate primarily at the SBU level. An SBU is defined as four sets):

- Products and services
- Target customers (e.g. geographic region, channels of distribution, sizes, etc.)
- Competitors
- Vertical supply chain

For two businesses to be considered as different SBUs, they must be characterized by distinctive:

- Operating technology – Production equipment, R&D efforts, etc.
- Market maturity – Growth, innovation rate, etc.
- Competitive position – Competitors, market shares, customer preferences, etc.
- Financial results – Prices, investments, etc.
- Marketing skills – Customer

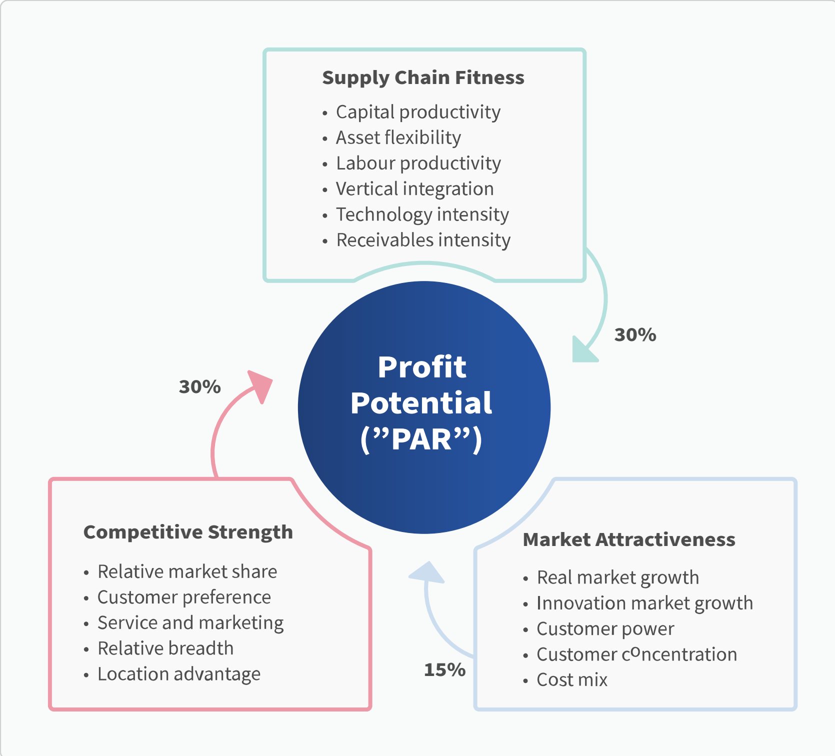
PIMS models and analyses focus on SBUs as that is where you interface with your customers, where you evaluate investment and marketing decisions, where your operational and financial performance are determined, and fundamentally where you create or destroy value.

PAR

Corporations often invest in conventional league table benchmarking against their strongest competitors and attempt to emulate the most successful ones. The equivalent analogy from the military would be to ask “who has the strongest army and what turf are they best at fighting on?”, and then to attack them on that turf. This strategy is clearly a recipe for disaster! Furthermore, when undertaking financial due-diligence or formulating business plans, most investment professionals linearly extrapolate the business’ past profitability and margin development and forecast optimistic improvements in working capital.

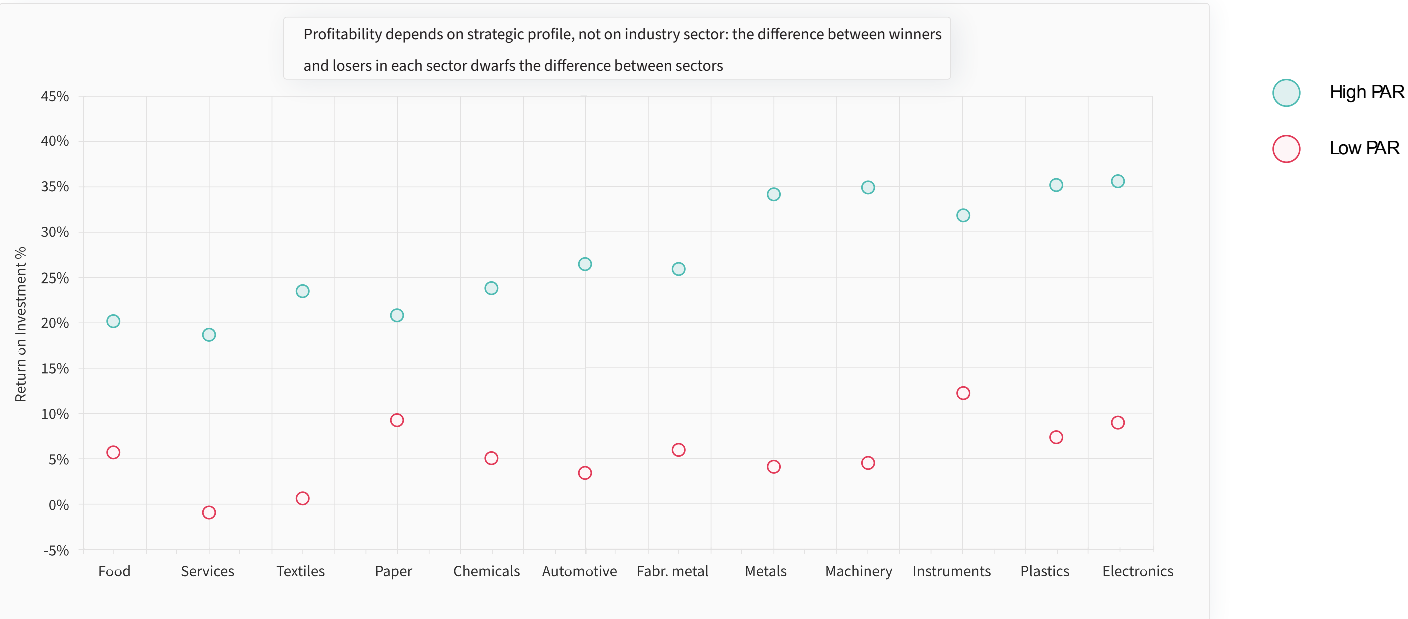
Research into the PIMS® strategy database provides conclusive evidence that investing on the basis of historic or current performance is no better than investing at random. The foundation of a successful strategy is to understand and learn from the intrinsic drivers of business performance (e.g. complexity, customer structure, supply chain characteristics, etc.) and taking into account the differences that make a difference. At PIMS, we employ the PAR methodology to quantify the sustainable profit potential of an SBU and pinpoint strategic strengths and weaknesses to help businesses develop an evidence based strategy.

PAR is a multiple regression model that takes into consideration structural factors that explain most1 of the variation in performance between businesses. These factors are lead indicators of profitability and their effects are consistent across time and across different industries.



The ilustration on the left provides an overview of the factors that drive the PIMS PAR model. The amalgamation of these structural factors draws the strategic profile of an SBU (impact of each factor on expected profitability) which adds up to its PAR.

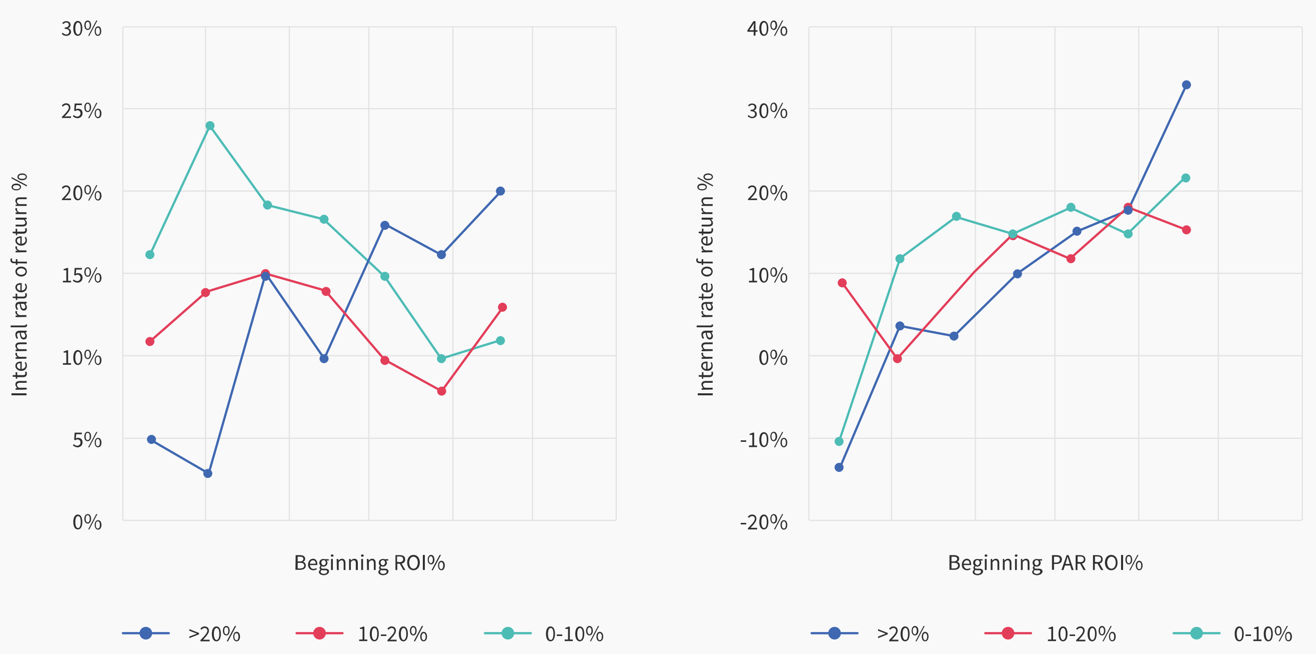
The chart below from the PIMS® strategy database shows that for SBUs from different industries with a high PAR (i.e. strong share and customer preference in an attractive market with a fit supply chain) have an average ROI of 30% in comparison to the 10% for those with a weak strategic profile. The laws of the marketplace are the same for different industries, what matters is your strategic profile.



Furthermore, it turns out that PAR profitability doesn't just give a benchmark for current performance, it also helps investment professionals to decide which SBUs to invest in. The SBUs in the PIMS® strategy database were split into 3 groups as follows:

- The farther right a purchase criterion is positioned the greater is its importance. All attributes add up to 100 %
- Businesses investing "heavily": net assets (i.e. capital employed) growing faster than 20% p.a.
- Businesses investing "somewhat": net assets growing at 10 to 20% p.a
- Businesses investing "modestly": net assets growing at 0 to 10% p.a.

On the chart below, the vertical axis shows the internal rate of return (IRR), which measures the shareholders' per annum (p.a.) percentage growth rate in wealth from buying an SBU in year 1, running it for 4 years, getting its free cash flow, and selling it in year 4.



For the left hand chart, the businesses are lined up along the horizontal axis according to their actual ROI (EBIT as % of net assets) at the beginning of the four years: those with negative ROI worse than -10% are on the left, then those with -10% to 0%, and so on in increments of 10%. There is a certain amount of up-and-down zigzag due to sample sizes, but the trend is clear: the lines are basically flat, it is generally no better to invest in a business starting at 50% ROI than one starting at -10% ROI (only the heavy investors show a slight positive slope).

For the right hand chart, the businesses are lined up horizontally instead according to their PAR ROI at the beginning of the four years. Despite the fact that PAR ROI and actual ROI are highly correlated, something magical happens as a result of this re-ordering. All three lines have a strong positive slope, with the slope strongest for the heavy investors. Clearly, anyone making an investment decision in a business, without knowing its PAR ROI, is flying blind.

The PAR model is also useful in testing possible futures, e.g. for an acquisition that combines your business with a competitor, or a supplier, you can draw the PAR profile of the combined business versus the two stand-alone businesses to evaluate likely synergies (and therefore how much you can afford to pay). Similarly for alternative market scenarios, technology changes, etc..

ROLA

The Report on Look-Alikes (ROLA) enables you to learn from peer businesses with similar cost & capital structures and competitive positions in similar market environments. It assists all stages of business transformation:

Stage	Topic
Diagnosis	Why is your business above or below PAR? What distinguishes succeful business “like you” from unsuccessful ones? How do the critical KPI’s change in different scenarios?
Prescription	What are the things you’ll need to do to succeed? What distinguishes “winners” from “losers” starting where you are? What are the barriers to entry in this market? What are the consequences of success versus failure?
Treatment	Can you afford to compromise on factor X (e.g. advertising spend, service quality, innovation, etc.)?
Cure	Ongoing health check to ensure the fulfilment of potential.
Contingency	What external shock would trigger a major re-think? What doesn’t change?

The ROLA process works as follows:

Draw the business’s strategic profile:

Identify the strategic factors the look-alike businesses should match on. E.g.:

a. Market environment (growth, size and innovation, etc.);
b. Customer characteristics (typical purchase size, use of distributors, etc.); and
c. Structural factors (capital and labour intensity, vertical integration, etc.).

1

Choose an appropriate success metric:

Identify the strategic factors the look-alike businesses should match on. E.g.:

a. ROI or ROS - If improving profitability is the primary objective;
b. Sales growth or market share - If the focus is on growth.

2

Obtain the look-alike businesses:

The ROLA algorithm finds the sample of business-es that match your strategic profile, and splits them between winners and losers on the basis of the success metric.

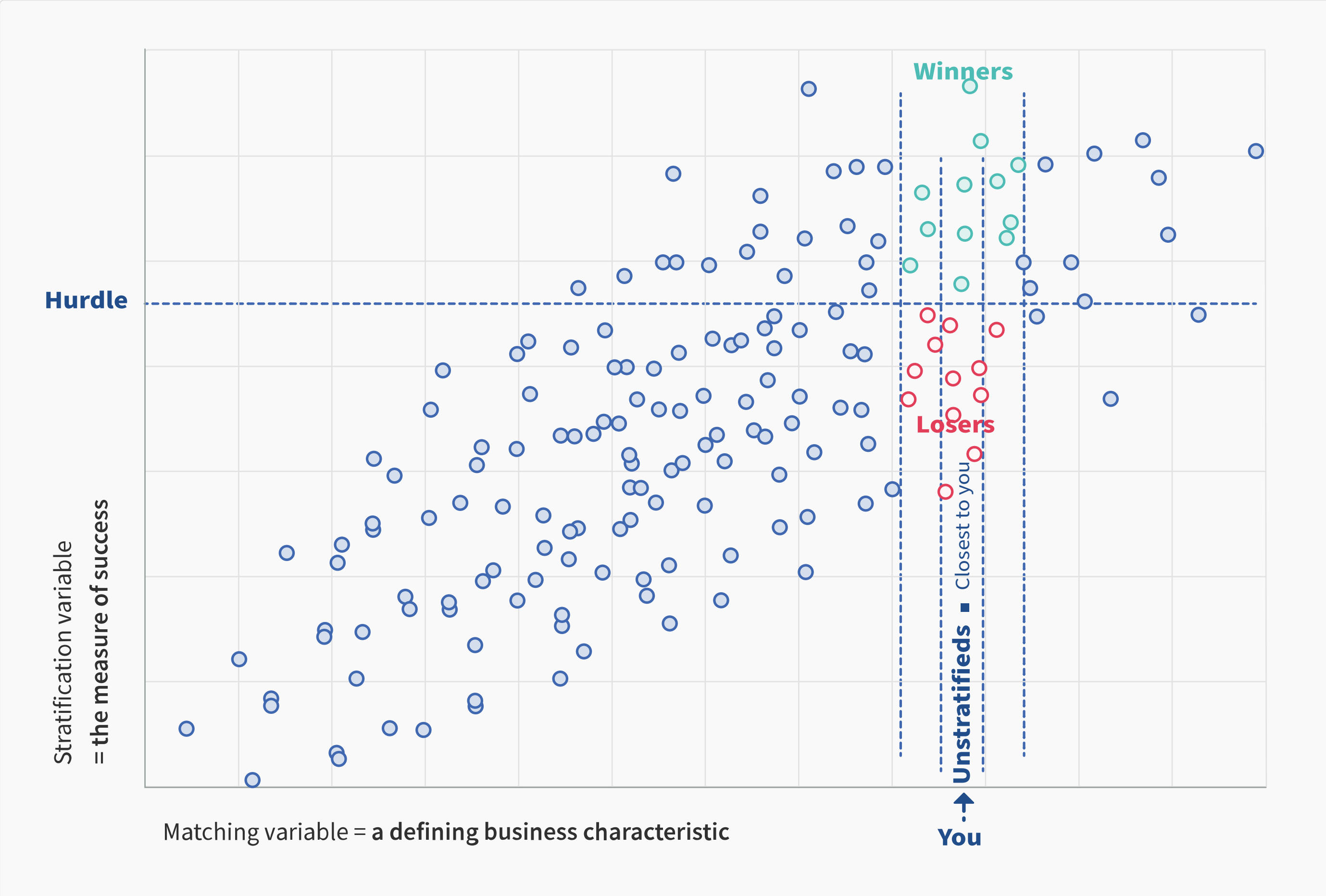
3

Understand the differences between winners and losers

The significant differences between winners and losers suggest which strategy should succeed and which tactics are crucial for it to work. Act accordingly.

4

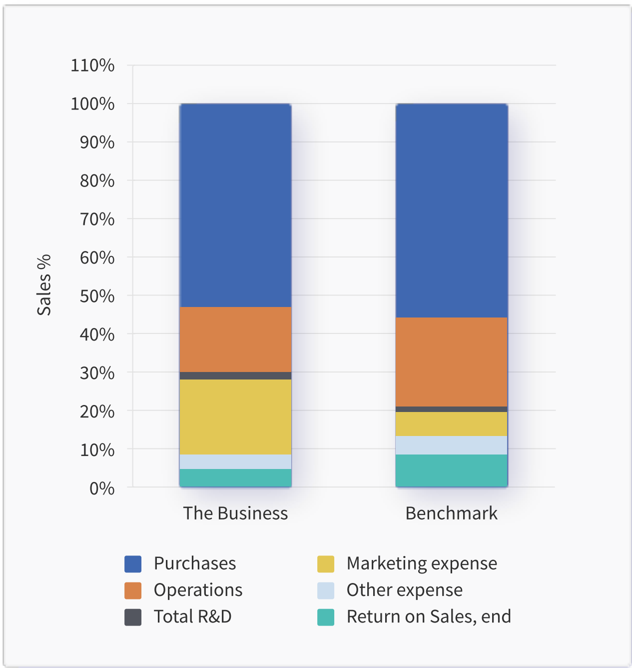
The chart below is illustrating the selection of look-alike businesses in the ROLA algorithm.



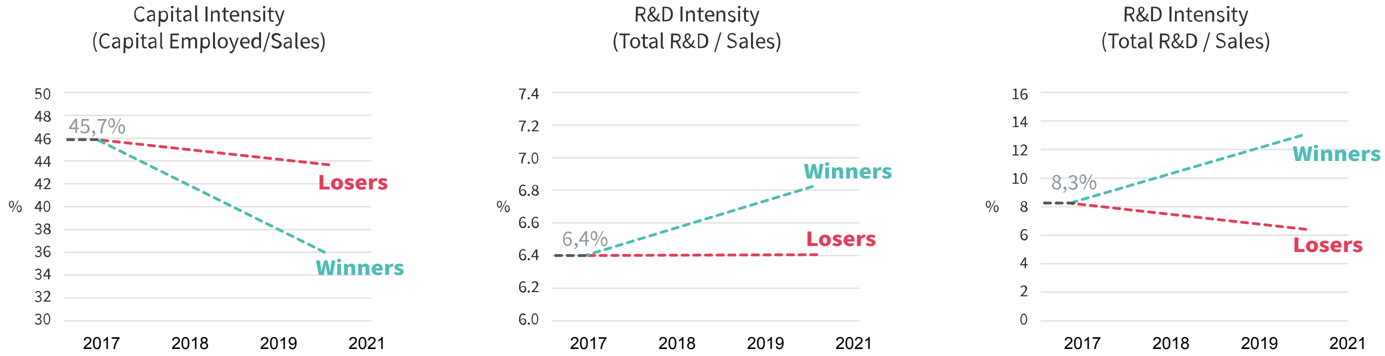
ROLA is flexible and the algorithm can be fine-tuned to provide insights into many specific issues (e.g. barriers to entry, optimal marketing mix, post-merger integration). The commonest ROLAs are:

1. Operational ROLA. If you are below par profit, which operational improvements are most called for? (e.g. optimise the marketing or R&D spend, streamline the overheads or working capital, etc.). It focuses cross-sectionally on differences at a point in time. Figure 5 shows an output where an income statement is compared to winning look-alikes, with the biggest difference in marketing expenses.

The chart on the right is illustrating an income statement comparison in the Operational ROLA



2. Strategic ROLA. If you are above par, which elements of strategic transformation are key? (e.g. advertising & promotion mix, product versus process R&D, capital investment, etc.). It focuses on changes in par over 3-4 years. The chart below shows an output where winners and losers vary with regards to capital and R&D intensity and how that impacts profitability (ROS).



1. Winners improve capital intensity by improving (i) working capital, (ii) capacity utilisation (of fixed assets) and (iii) genuine fixed capital productivity (increasing through-put rates).
2. Winners increase their Product R&D faster than sales growth, due to the demands for quality improvement, cost reduction and step change innovation(s). Process R&D just keeps pace with sales growth.
3. There is still upside potencial with regard to EBIT: winners on average improve ROS by 1.6% point p.a.

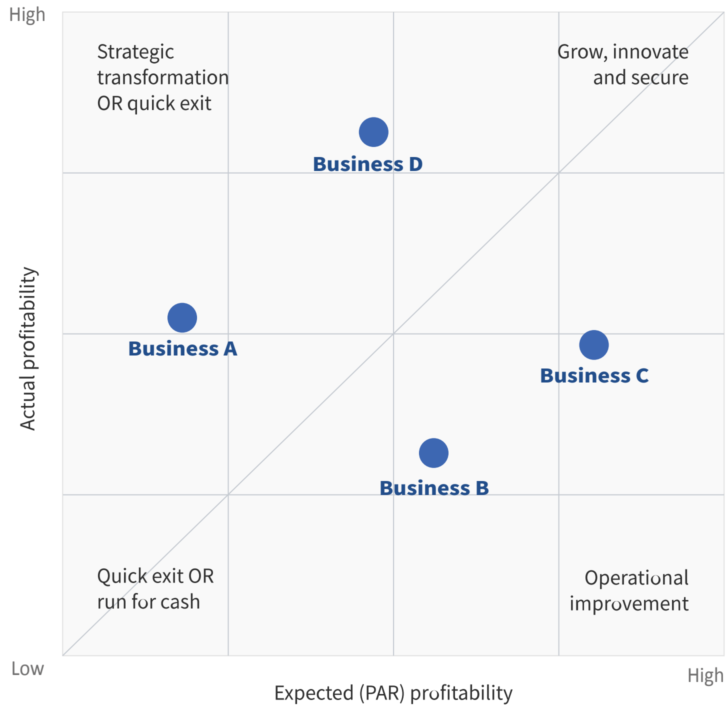
The chart above is illustrating the development in the strategies of winners and losers in the Strategic ROLA

If you mimic your most successful competitor, you will share the disastrous fate of an army that chooses to invade the turf where its enemy is strongest. Instead, exploit your own strengths by copying peers who faced the same intrinsic challenge, but won out by acting smart on the drivers within their control.

Portfolio Analysis

Most companies with several business units set strategy and allocate resources according to corporate politics and media fashions, not evidence. PIMS enables you to objectively diagnose issues in a portfolio and optimise resource allocation and strategy. The par model maps the actual level of profitability versus the expected level for each constituent SBU, and immediately suggests which way to go:

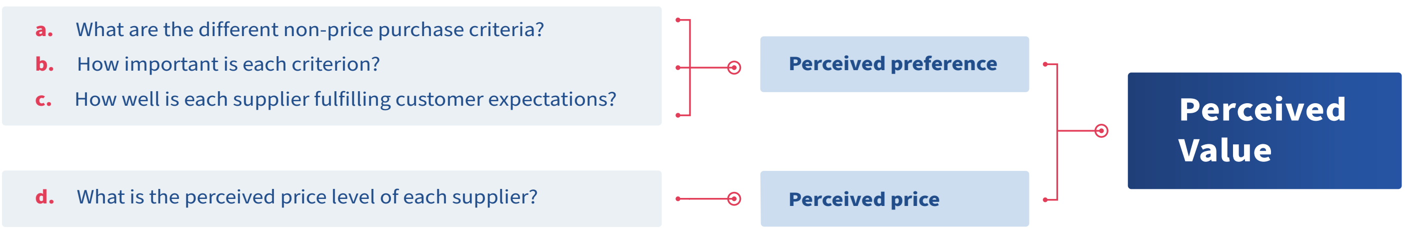
In the chart on the right, SBU A and D's actual profitability exceeds their par, while SBU B and C's actual profitability is below their par. In the PIMS strategy database, businesses converge over time to par. Thus, SBUs A and D must focus on strategic improvements whilst SBUs B and C should emphasise operational improvements. With regards to resource allocation, there is a strong case for exiting SBU A (as it has a low profit potential) and investing in capacity, marketing and innovation for SBU D. If the reason for A & D both outperforming is strong synergies, it may be that part of A can be folded into D and the rest sold. SBUs B and C should become leaner, improving labour and asset productivity, though C, with the highest par, should also explore avenues for growth.



Customer Value Analysis

Customer Value is the value of a business' offering as perceived by the customer, relative to the other value offerings considered by the customer. Research on the PIMS® database shows that organisations that provide superior customer value gain market share and end up rewarding their employees and suppliers better, creating more jobs, rewarding investors better, and building long-term viable enterprises.

PIMS® Customer Value Analysis (PIMS® CVA) measures the customers' view of customers' purchase decision criteria relative to competing offers from other suppliers and in doing so, gives a comprehensive assessment of how well the business is meeting customer needs and highlights areas for improvement. The process of deriving Customer Value, as perceived by the customer, can be found below:

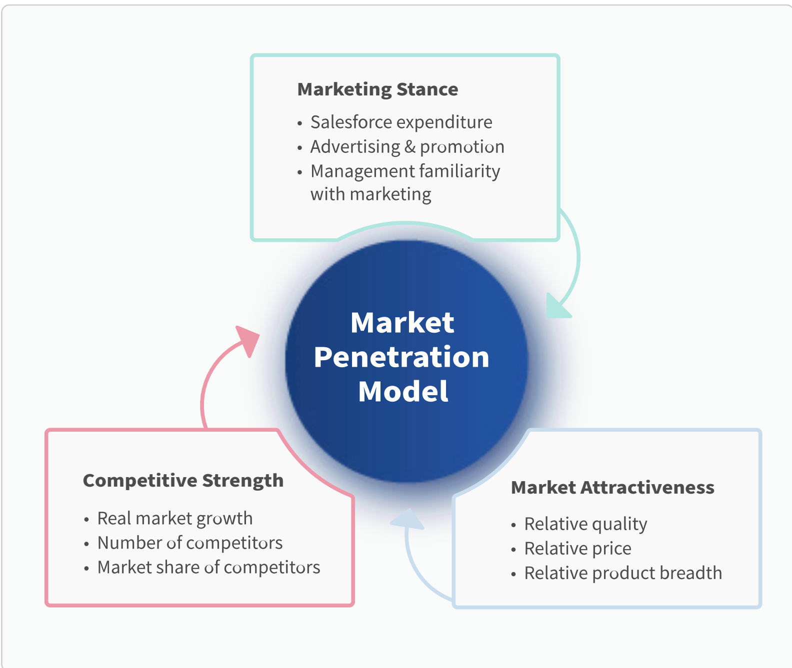


The aim of the Customer Value Analysis is to align a business' offering as closely as possible to the customer needs. The analysis helps identify unnecessary costs where a business focuses on elements of the offering which are unimportant to the customer and opportunities where the customer needs are not satisfied.

The PIMS® CVA can now be accessed as a Software as a Service. The primary objectives of this application is to aid senior management team in topics including strategy development, pricing decisions, process improvement etc. To sign up for the freemium version of the application, please register on: https://www.pimsassociates.com/cva-as-a-service-freemium/.
To read the in-depth PIMS® CVA solution brochure, please visit: https://www.pimsassociates.com/pims-customer-value-analysis-as-a-service/

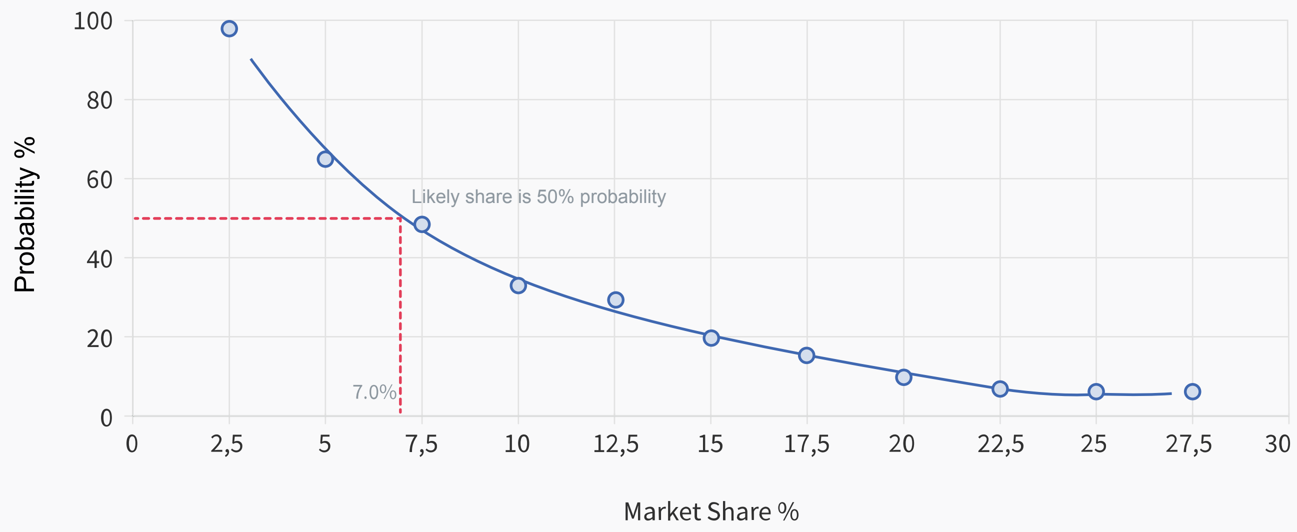
Start-up Analysis

Generally speaking, start-up businesses are unprofitable. The aim is to build a business with a positive future profit potential. Since profitability is an inadequate measure of start-up success, what are the alternatives? The PIMS evidence is that the most important predictor of long term success for a start-up business is its rate of market penetration. Thus, leveraging the data from over 250 start-up businesses worldwide, we have developed a logistic regression model that evaluates the probability of a start-up achieving a target market share in a given timeframe, e.g. four years (the market penetration model). The model enables start-ups to assess whether the target market share is over or under optimistic and shape their launch plans and changing resource allocations accordingly.



The chart above provides an overview of some of the factors that drive the PIMS start-up market penetration model. The factors enable us to quantify the strategic profile of the start-up business's plan and derive the success likelihood.

The chart below shows the output of the model. In the case of the example business, the probability of achieving a market share of up to 5% is greater than 60%, with a 7.5% share of the market being the median of what can be achieved given the current strategy. If this is as per the business' plans, then it is a "go" situation. However, if the projected median is significantly below the planned level, the strategy needs to be reconsidered.



Of course, start-up businesses face many diverse challenges. However, the PIMS applications introduced in previous sections provide an evidence-based approach to tackle these challenges. For example:

Common Start-up Challenge	Example	PIMS Solution
Getting the offer right	Innapropriate price position	Customer Value Analysis
Competitor reaction	Wrongly assuming competitors will not challenge / react to us	ROLA analysis from the perspective of the incumbent
Long term cost improvement, profitability and cash return	Over-optimistic profit projection at majurity	PAR analysis at year x given likely market penetration

> The PIMS Principles puts into a coherent context a unique set of guidelines that have proven to be extremely valuable in the management of businesses across a wide spectrum of industries.
>
> Former Senior Vice President The Chase Bank

Other applications of PIMS

While PIMS has been concerned mainly with the big strategic challenges facing a company, even for more operational concerns the concepts of PAR benchmarks, look-alikes, and cost/quality tradeoffs are applicable. These have included:

- Cross-industry benchmarking of overheads, salesforce/CRM effort, marketing mix, HR policies, finance and IT functions, working capital. Benchmarks that take account of the structural differences that make a difference are so much more useable.
- Within-industry benchmarking of industry-specific processes related to production, distribution, R&D, etc.. Again, benchmarks should take account of structural factors such as scale, complexity, automation, innovation, and the environment.
- Within-company "customer value analysis" of how well different departments (e.g. IT, R&D, Finance, HR, Procurement) meet the needs of internal customers (e.g. the salesforce, the factories, the supply chain) at various specified service levels with different costs. Only when a department has a clear map of the key cost-critical attributes in its service offering can it spend its time and money effectively.

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> PIMS contains the insights and evidence which are invaluable for companies that are restructuring to maintain their vitality and market competitiveness. PIMS contains empirical data that shows the strategic reasons why winning businesses win and losers lose.
>
> Former President Dexter Corporation

PIMS Associates is best known for the PIMS® (Profit Impact of Market Strategy®) programme, which was initiated by General Electric in the 1960's for portfolio and investment analysis. The PIMS® tools and databases have been refined and developed first by Harvard, then as an independent company, and now as part of PIMS Associates. The PIMS Strategy database, developed in the course of consulting assignments across the globe, now contains in depth customer, market, and financial data for more than 4'500 SBUs with a minimum time span of three years. This gives us 25'000 years of real business experience at our finger tips.

In the 1980s, PIMS Associates invented Customer Value Analysis (CVA®). This enables businesses to have a comprehensive understanding of their value propostion in the market. It quantifies the customers' view of purchase decision criteria relative to competing offers from other suppliers. The unique approach has helped improve the competitiveness of over 12'000 businesses from more 2000 companies worldwide, including consumer goods, industrial goods, healthcare, software, financial services and many others.

We consult organisations across the private, public, and social sectors to tackle their most important challenges and capture their greatest opportunities. Our focus is on Strategy Development, Customer Value Management, Operational Excellence and Transformation and Change Management. To succeed, organisations must blend digital and human capabilities.

> *When the history of business strategy is written, PIMS will remain as a milestone.*
>
> Philip Kotler, Father of modern marketing

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