

# becoming a world-leading innovator

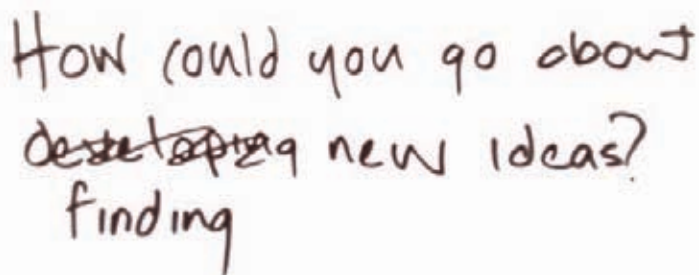
effectively commercialising new ideas in SMEs

INNOVATIONZ  
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# EFFECTIVELY COMMERCIALISING YOUR NEW IDEAS

## DEVELOPING A STRATEGIC ADVANTAGE FROM YOUR COMPANY'S CAPABILITIES

Small to Medium Enterprises (SMEs) are world-leading innovators. But not all SMEs can replicate that same success every time. The problem is that their methods are ambiguous and undefined. Only a small amount of research has gone into this area, and little is understood about the process that SMEs use in the development of new products. In order to help them in their process of Innovation and New Product Development (NPD), a framework has been formed that gives these businesses the opportunities to recognise and develop their own capabilities in the NPD process. This leads to better innovations, faster.



How could you go about  
~~developing~~ new ideas?  
finding

This framework was developed through research into the NPD processes in SMEs. The initial question was not how to go about developing new ideas, but rather in forming new ones. In what direction should the SMEs pursue ideas, products, or strategies? The framework aims to help these businesses in recognising in what manner they can best approach idea generation, how to play to their strengths.

### HOW DOES IT WORK

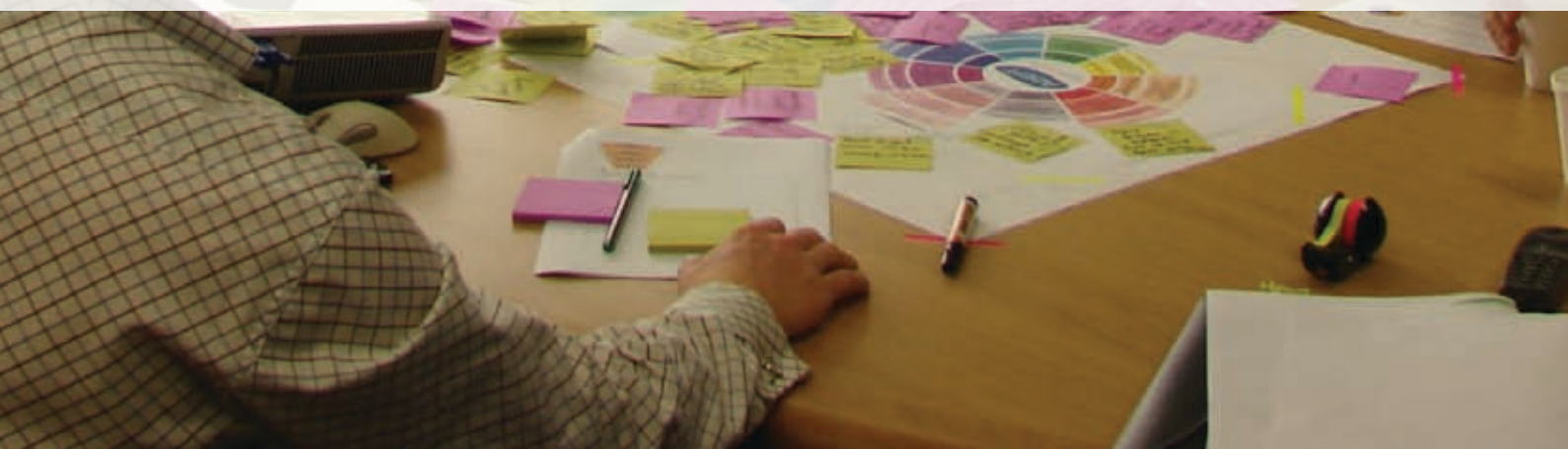
Utilising a holistic perspective, the internal and external factors affecting the NPD process are identified and analysed; including, but not limited to, capabilities, communication, and value chain analysis. The framework consists of a number of visual models, visually demonstrating the capabilities of the SME in various areas. This is then used for analysis of strengths, development of strategy and effective communication of the overall outcomes.

The framework has been implemented and demonstrated within several businesses; and has proven results, especially in the case of Adept, the company through which the initial system was developed. This framework is transferable across a range of different industries, and is an effective comparison tool for evaluating both current capabilities and planned improvements. It should give an insight as to where capabilities lie, how value is created and what improvements could be made.



## SMEs ARE WORLD-LEADING INNOVATORS... BUT NOT ALL CAN REPLICATE THAT SUCCESS

SMEs don't lack a capacity for innovation overall, but the chaotic nature of their business environment means that many are left behind when it comes to efficient New Product Development and utilising their specific capabilities. This framework aims to counter that, while still maintaining the freedom and oversight of the owner/manager.



# THE HOLISTIC FRAMEWORK

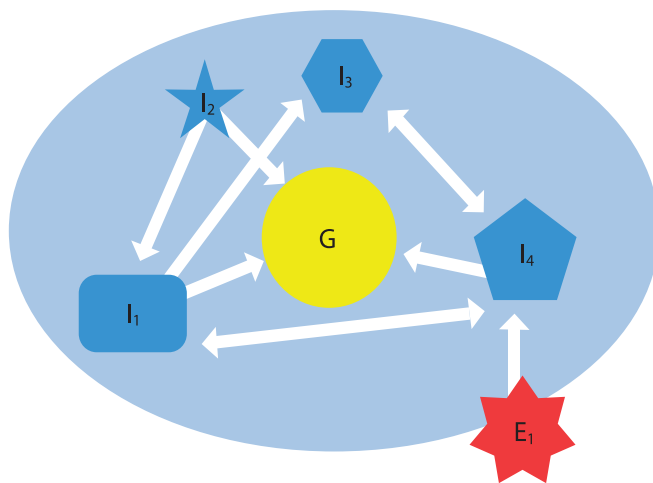
## HOW ARE NEW PRODUCTS DEVELOPED, THE OVERALL PERSPECTIVE

Organisations not only need to find a way to support and extend the owner/managers perspective, but also, have a framework that can support its development. This framework needs to reflect the business environment without being a predictive model - We cannot include every variable, so instead it is best to adopt a holistic approach.

The aim of the holistic framework is to represent the dimensions of the organisation that relate to NPD. There are many elements that exist in any organisation environment and they each interact and effect each other. By identifying these dimensions it enables a holistic perspective that can be used as a visual tool to support, extend or replicate the outlook of the owner/manager.

### STRUCTURE

The holistic model has been developed firstly with a blue oval to represent the organizations boundaries. Inside this oval there are multiple figures which embody the dimensions that influence NPD, signifying the multidimensional environment.



The red and blue figures are formulated to represent the internal and external influences on the organisation. The darker blue shapes are the internal influences on NPD. These include financial, cultural, personnel and communication dimensions etc. The red shape is the external influence on NPD. This includes the competitive environment, market trends, opportunities, threats etc. The core element of the model is the central yellow circle called the VGM (value generation model). All the other models directly or indirectly affect this.

These models are unique to the organization and can create barriers to limit or enablers to support NPD.



## THE HOLISTIC MODEL ILLUSTRATES THE ORGANISATION IN ITS NATURAL BUSINESS ENVIRONMENT

Instead of a singular model, the multiple models of the Holistic framework are able to represent dimensions that affect the organisation both internally and externally. It offers a view of the interconnectivity of the various dimensions and how they influence each other and the New Product Development Process.



# THE VALUE GENERATION MODEL

## DEVELOPING AND VISUALISING YOUR CAPABILITIES

Visualisation is important in any organisation. The Value Generation model is an imperative tool for aiding individuals in understanding what they have to work on and how they are to achieve success in these areas. Essentially the model is a value chain curved around into a circle, the circular structure demonstrates that NPD should be a cyclical process starting and ending with the customer.

The value chain contains the various departmental elements controlled in the business. Each element has a range of required activities that must be completed to fulfil that portion of the value chain. These activities are completed with capabilities held or accessed by the organization (internal or external).

The objective is to have a complete circle of capabilities that accomplish all the activities. In this way the organization should be able to develop new products systematically.



### STRUCTURE

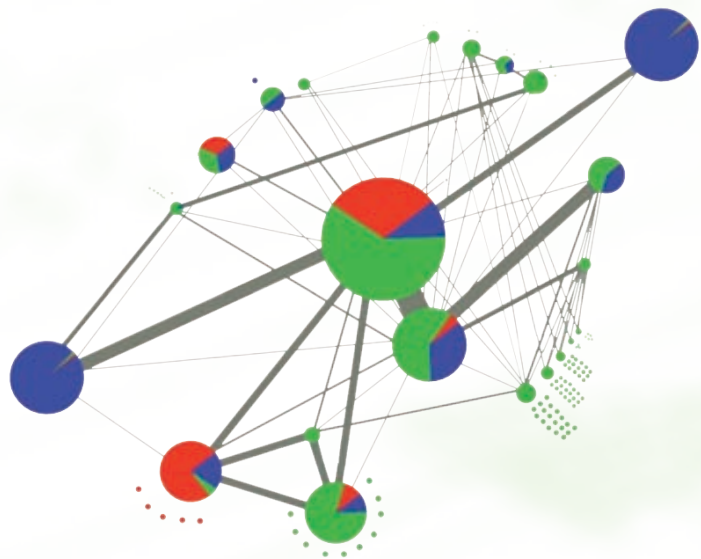
The value generation model is formatted into 3 distinct layers: the inner, middle and outer rings of the circle. The inner circle represents the personnel that execute, manage and direct the value chain in each functional area. The middle ring represents the middle management of the execution of the capabilities and the outer ring represents the human resources that execute the various capabilities of the value chain.

# OTHER

## SUPPORTING MODELS

### THE INTERNAL AND EXTERNAL INFLUENCES OF NEW PRODUCT DEVELOPMENT

In the Holistic Framework the central VGM is supported by two types of models, internal and external. It is important to note that the core facet of the holistic framework is that it enables interpretation across a range of models rather than creating one prescriptive model.



These supporting models should represent the contextual and environmental influences on the core model, making it possible for the emergent or entrepreneurial opportunities to be assessed. The VGM and the supporting models, collectively, contribute to the holistic approach.

The internal supporting models represent the contextual dimensions the organization. The elements that have a potential effect on the value chain must be determined and presented. These must be selected so that they represent the holistic approach of the owner/manager. Therefore, there can be no defined set of supporting models.

Despite this, they may still include:

- Formal vs informal management
- Communication structure
- Personalities and personal influence
- Motivations and ambition
- External business trends
- External business relationships
- Behavioral and cultural effects

The medium or methodology for representing the supporting models is not restrictive. Any means of representing an influence so that it is communicable and comparable to another is sufficient. They may include visual, written, or graphical material.

# IMPLEMENTING THE SYSTEM

## TURNING THE FRAMEWORK INTO A REALISTIC ADVANTAGE

This framework has three simple steps for the implementation into any SME. The system was first realised with Adept, where it was worked through to a final strategy for developing NPD processes and scenarios for an overall strategic direction. It can easily be used for many businesses, when proper analysis of capabilities and processes are identified.

These three stages follow a specific process; of analysis, strategic development, and communication. The wider application of this process allows for a comparison between and against multiple businesses, or even industries.

IN PREPARING FOR BATTLE I HAVE ALWAYS FOUND THAT PLANS ARE USELESS, BUT PLANNING IS INDISPENSABLE (DWIGHT D. EISENHOWER)

Implementation is more than just a plan, it is an ever evolving adjustment to integrate a change or solution into the existing environment. When implementing this process into any organisation, it is important to remember that environmental factors can change; we must be continually planning to account for these variations.

## STAGE ONE

### ANALYSIS

Firstly, the holistic framework for the company is developed. This is extended also to the development of the capability model, with which the generic capability model is a great starting point. An accurate and effective capability model should be created through the collaboration of management, the development or creative members, and independent advisors. The value chain, as a part of this, is developed and the contextual influences (internal and external variables) are placed in the model. When this holistic perspective is created, the models can be used to analyse the capabilities and find specific areas with which to start developing strategic goals.

## STAGE TWO

### STRATEGIC DEVELOPMENT

Once the capability models and value chain analysis have been completed, the information gathered can be used for the development of strategic goal setting. Firstly, a look at the SME's capabilities will enable the identification of strengths and weaknesses in the current processes. Secondly, looking through the current value chains will help in the realisation of profit centres and through which avenues the most effective, profitable products are produced. Further from this, strategic plans can be developed in the form of new capability models. Identifying on a whole which areas are to be focused on, and in turn what specific goals are required to achieve the strategic direction chosen.

## STAGE THREE

### COMMUNICATION

Finally, the strategy is developed and communicated. This is primarily envisioned in the form of short term, and possibly long term, capability models. The visualisation of these strategies in the capability models helps readers to quickly digest and understand the information in a more intuitive way. Presentation of the strategic direction can be easily conveyed to others, and specific areas can be split up for separate divisions and personnel within the company.

# CASE EXAMPLE: ADEPT

## THE RESULTS OF IMPLEMENTATION

Adept is a Plastic Injection-Moulding manufacturer and Product Development Consultancy based in Auckland, New Zealand. This is an overview of how the strategy was implemented in analysing Adept's situation. As a result of this implementation, Adept succeeded in adapting focus from a ... to a proprietary manufacture organisation; taking advantage of its specific skills and capabilities and using these to create a well-rounded strategy.

## ANALYSIS: HOLISTIC FRAMEWORK AND VALUE GENERATION MODEL

The holistic framework was first developed, finding the influences in the development of new proprietary products. Furthermore, a range of meetings were held with key people to develop the initial VGM. The relatively balanced integrated model reflected Adept's success to date. If there were areas lacking it would highlight areas for improvement. The dark coloured inner circle indicates core capabilities, mid-range colour indicates limited capabilities and light colour indicates outsourced capabilities.



## STRATEGIC DEVELOPMENT: SCENARIOS

A collective brainstorm of Adept's future direction was completed based on the Value Generation Model and Holistic Framework. From this discussion five synergistic but distinct strategies were identified, these goals were demonstrated as separate VGM models.

## COMMUNICATION: MODEL COMPARISON

The image above shows one example of how the model can be used to communicate. It shows the different VGM models that Adept has developed for different areas of their business. A comparison of the different shapes show the degree to which the different elements are producing results.



## INNOVATIONZ

WHO WE ARE, WHAT WE DO

INNOVATIONZ is a group that incorporates a large range of the areas related to innovation and New Product Development (NPD), bringing together designers, engineers, academics and researchers, and the business people at the cutting edge of innovation in New Zealand. We aim to stimulate innovation and new approaches to NPD. Our projects are aimed at integrating the disciplines of engineering, design and business through teaching research and practice. We have initiated an educational and collaborative infrastructure across technology, business and design.

- ▶ Developing excellence in design, technology and manufacturing know-how.
- ▶ Fostering manufacturing technology and engineering based products.
- ▶ Supporting export-oriented SMEs and helping them develop their capabilities.

### FOR MORE INFORMATION

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