

## Environmental Scanning / Market Intelligence Tool

### What is Environmental Scanning?

Environmental scanning for commercialisation involves looking at all the factors that might affect the entry of a new technology or product into the marketplace and the assessment of these influencing factors for use in business planning.

Environmental scanning identifies important environmental changes and encourages you to be more flexible and to respond more quickly to emerging opportunities and threats. Correctly done, environmental scanning is more than a research process – it is a learning process.

### The benefits and outcomes of environmental scanning are:

- a detailed understanding of the context in which you operate or plan to operate
- the ability to adapt to a rapidly changing environment
- strategies for creating a more desirable future operating environment
- improving judgement regarding what aspects of the future cannot be changed and what aspects can be changed and how.

Other terms related to environmental scanning include: systems analysis, futures studies, foresight, strategic planning.

Websites with definitions and explanations of environmental planning.

Infinite Futures (<http://www.infinitefutures.com/essays/prez/holescan/tsld001.htm>) - Wendy Schultz refers to Environmental Scanning as a futures tool for identifying and monitoring emergence, growth and coalescence of change.

Information Research October 2001 (<http://informationr.net/ir/7-1/paper112.html>) - Chun Wei Woo says environmental scanning is the acquisition and use of information about events, trends, and relationships in an organization's external environment, the knowledge of which would assist management in planning the organization's future.

University of North Carolina (<http://horizon.unc.edu/courses/papers/enviroscan/>) - James L Morrison, Professor Emeritus of Education.

### Benefits of environmental scanning

You may have the most brilliant technology or idea, but so what? The future is uncertain. The global environment is chaotic. The global market is extremely complex and subject to extremely rapid change. Emerging technologies appear in many places simultaneously. Competition is fierce. You need to build solid business foundations. You need a market edge. What will environmental scanning tell you?



TABLE 1.0

The questions	The tasks and the issues
Is there are market for it?	Preliminary feasibility analysis
Has anyone had this idea before ?	Novelty, value adding, incremental refinement
Has anyone made money out of a similar concept before?	What is their profile and how did they do it?
Is anyone else operating in this space?	Competitors and potential partners
What is the space? And therefore what is the market? Where and how big and who are the players?	Market Research
How can I make money out of this?	Business/customer model and protection
How can I value-add to my idea?	Planning for further R&D, scale up, prototype and product development, "commercialisation" planning and pathway, financing, investor perceptions and interests
What format does the technology or the structure of the "deal" need to be in to be able to make money out of it?	Prototype and product development, operations planning, financial planning and modeling, distribution models, licensing, company formation
I am confident that I have a high level of skills and ability to develop this technology, but I am not going to be able to do it all on my own. Who can help me?	Synergistic/ collaborative industry partners, investors, planners, personnel resourcing
How am I going to get my technology into the market?	Market entry strategies, pricing, partnering, promotion

This list of questions is not exclusive, but it is a good representation of factors that critically effect any commercialisation activity.

An environmental scanning process will enable you to answer these questions and others that will enable you to develop a business plan and model that will form the basis of any commercialisation strategy you undertake.

Your outcome and goal to aim for through this process is a simple proposition that says:

TABLE 1.1

The structure of the statement	Information you supply
<b>This proposal</b>	technology/ idea etc
<b>enables/offers a</b>	product/ solution
<b>to</b>	a market.
<b>It will be in the form of</b>	describe the product
<b>and will operate by</b>	describe its operation
<b>It will have advantages over</b>	the competition or current technology
<b>including</b>	describe its advantages.
<b>To take full market advantage of this opportunity it will be necessary to</b>	describe your strategy
<b>and offer financial returns through</b>	describe your business model.

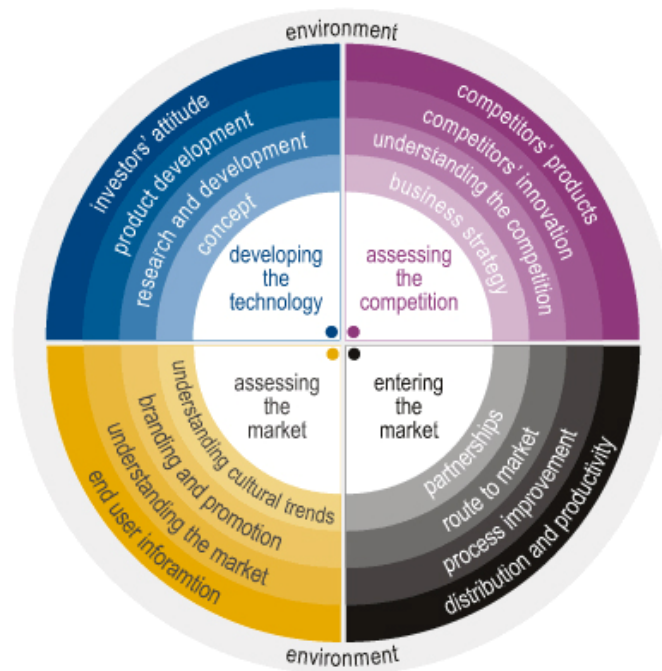
If you can develop this brief statement and be able to understand and explain in detail the background to it, you will have progressed a significant way towards developing the core of a business plan, and will have the basis of a “pitch” to an investor, by telling them briefly and succinctly what the business opportunity is.

### How to use the model

This environmental scanning model has been developed by the AIC in response to demand and input generated from broad stakeholder consultation during 2002. Once undertaken and completed, this model will provide the basis of an effective business plan.

Environmental scanning can be as sophisticated as distributing surveys, conducting formal literature reviews, and convening focus groups or as simple as keeping up with the journals and web sites in your industry sector. This model is divided into four quadrants.

## Model 1.0



You will observe that the technology is only one quadrant. While it is important, the business aspects represented by the other three quadrants are equally so. The relative weightings of one-quarter technology and three-quarters business effort are reasonable guides but the weightings may vary depending on the stage of the technology and its respective market.

This model is intended to be a practical guide to:

- identification of information gaps necessary to the strategy marketing approach required by new technology concepts, products and services
- provision of potential sources of information currently available, both free of charge and at a price.

This model is applicable from a range of perspectives:

- whole-of-organisation level prior to establishing a new strategic research program
- divisional or group level when considering a product R&D stream or spin off/ start-up program
- more individual inventor level assessing the development of a new business/ commercial venture.

All quadrants should be considered in conjunction with each other. Each quadrant has specific associated issues while others can be common to two or three quadrants. The critical factor to consider with this model is that it is iterative, and information gained through the systematic consideration of issues in each quadrant will produce feedback that will constantly feed into and influence decisions made in others.

Here are 10 “commandments” for environmental scanning:

- The truth is out there, it's just a matter of being able to locate it.
- Quality information is often supplied free.
- Developing the technology is only one quarter of the task.
- Environmental scanning is not static, nor does it ever end.
- Technology development and marketing is not a linear process, be flexible.
- Environmental scanning is not just about "what is", it is also about "what will be".
- Any process in environmental scanning will influence every other process.
- The environment is a complex and chaotic system, the more you learn the better your chances.
- Environmental scanning is iterative, and each time enhances your capabilities.
- Environmental scanning will stimulate your creativity and capability and possibly identify people who can help you.

Ultimately environmental scanning will enable you to understand your market environment, provide information to enable you to effectively analyse your market and what you need to do to make your business strategy a success.

### Developing the Technology

The technological quadrant of the environmental scanning wheel, this section incorporates all stages of the process from conceptualizing the technology to identifying funding sources.

Thorough research at this stage can help ensure your new product or technology makes a smooth transition to the market entry phase. Accordingly, a wide range of links are presented, giving access to useful resources and helping answer vital questions.

In the Investor Perspective section you will find the assessment of investor behaviour and the vital questions to consider when seeking investment.



### Rating your chances

You have developed a new product or a new technology. Has it been done before? How do you protect your product? How do you license it? Patent and literature searches will reveal competitive research. Technology forecasting and media searches will encourage consideration of future technology markets. Legal issues will clarify the steps you need to take.

## Research Tools

In-depth research is a crucial component of this phase.

Chemical Abstracts Service (CAS) (<http://info.cas.org/>)- Pathways to published research in the world's journal and patent literature chemistry, life sciences and more.

Derwent Online (<http://www.derwent.co.uk/>) - Online databases enable access to global scientific, research and business information for competitor intelligence, strategy planning and patent portfolio management. Private provider. Fees apply.

Dialog Home Page (<http://www.dialog.com/>) - Online-based information services to organizations in such fields as business, science, engineering, finance and law. Data from more than 800 million unique records. Dialog, a Thomson Company, is a private provider. Fees apply.

Intellectual Property Australia (includes Australian Patent Office) (<http://www.ipaustralia.gov.au/patents/index.shtml>) - The site features general information on IP Australia services, processes, points of contact, laws and regulations covering patents, and searchable patent databases.

Manual of Classification of Patents (<http://www.ibiblio.org/patents/>) - In the Index to the Classification you can determine the class of your idea by searching keywords.

Patent Attorneys (<http://www.irossco.com/patentattorneys.htm>)- A comprehensive list of patent attorneys in Australia.

United States Patent and Trademark Office (<http://www.uspto.gov/>) - The PTO is a non-commercial US federal entity and one of 14 bureaus in the Department of Commerce (DOC). The site contains links to the equivalent of IP Australia in other countries including the European Patent Office.

## Literary Reviews & Media searches

Links to both national and international resources to assist with your research.

National Center for Biotechnology Information (<http://www.ncbi.nlm.nih.gov/>) - NCBI has a multi-disciplinary research group composed of computer scientists, molecular biologists, mathematicians, biochemists, research physicians, and structural biologists concentrating on basic and applied research in computational molecular biology.

STAR (Skills to Advance Your Research) (<http://www.star.uts.edu.au/learning/index.html>) - Designed to support postgraduate research students. Self help and assistance.

University of Cambridge (<http://www.gen.cam.ac.uk/Library/literaturesearches.html>) - Go to the Genetics Library literature searches page to find links to the databases.

University of Sydney Library (<http://vein.library.usyd.edu.au/elibrary/copyright.html>) - A network of 24 libraries across 9 different campuses. Information about library services, as well as access to some electronic services.

US Copyright Office (<http://www.copyright.gov/>) - Publications, including informational circulars; application forms for copyright registration; links to the copyright law and to the homepages of other copyright-related organizations.

## What is a licence?

A license is a contractual agreement between the licensor (government, CRC, educational institution, other technology developer) and the licensee (usually a private company). The licensor grants to the licensee the right to use or develop the technology for a fee called a "royalty". There are three types of licenses: exclusive; partially exclusive; or nonexclusive license.

## Legal Issues

When developing a new product or technology is important to understand the relevant laws to protect your innovation.

Australasian Legal Information Institute (AUSTLII) (<http://www.austlii.edu.au/>) - A joint facility of UTS and UNSW Faculties of Law. Provides free access to Australian legal materials online. AustLII's broad public policy agenda is to improve access to justice through better access to information.

Australian Copyright Council (ACC) (<http://www.copyright.org.au/>) - ACC is an independent not-for-profit organisation providing advice, education and training, publications, news and information pertaining to all copyright issues.

IP Australia (<http://www.copyright.org.au/>) - Federal government agency that grants rights in patents, trade marks and designs.

IP Access (<http://www.ipaustralia.gov.au/ipaccess/>) - Administered by Federal Government Departments. The site provides a vast repository of information associated with intellectual property.

LexisNexis (<http://global.lexisnexis.com/au>) - One of Australia's largest legal publishers. LexisNexis Butterworths is a private provider. Fees apply for their product range.

Nolo's Legal Encyclopedia (<http://www.nolo.com/index.cfm>) - Nolo publishes materials on changes in the law, and feedback from customers, lawyers, judges and court staffers. The site provides articles on almost any legal topic, and links to other helpful web sites.

PIPERS Virtual Intellectual Property Library (<http://www.piperpat.co.nz/>) - Worldwide patent, patent attorney, copyright, trade mark, and intellectual property information. Contains resources for inventors. Pipers is a private provider, however, this library is free online.

Scale plus (<http://scaleplus.law.gov.au/>) - SCALEplus is the legal information retrieval system owned by the Australian Attorney-General's Department. SCALEplus is an integral part of the Australian Law Online initiative to bring low or no-cost access to the law for the community.

SCP Technology and Growth Pty Ltd (<http://www.scp.com.au/>) - Innovation Commercialisation Consultants with services including Intellectual Property Management. SCP is a private provider.

University of Queensland Library (<http://www.library.uq.edu.au/law/lawsites.phtml>) - Useful legal resources.

## Current licensable technologies and licensing Opportunities

There are many fields of research and development. As a sample, we have included a couple from the "pharmaceuticals" industry.

Knowledge Express (<http://www.knowledgeexpress.com/>) - Online databases for business development, licensable technologies, biotech. Knowledge express is a private provider. Fees from \$5 per abstract (suited to individuals) through to \$100,000 a year for global access (major corporations).

Los Alamos National Laboratory Licensable Technologies (<http://www.lanl.gov/partnerships/license/technologies/>) - The Laboratory's Industrial Business Development (IBD) Program Office encourages licensees to commercialize licensed technology by requiring fair market consideration for all technology licenses. This page contains a list of licensable technologies.

Pharmalicensing (<http://pharmalicensing.com/>) - Pharmalicensing's licensing directory gives you up-to-date access to technology licensing opportunities worldwide, enabling you to search for your requirements or browse by therapeutic target or industry sector. Registration is free.

WorldPharmaWeb (<http://www.pharmadeals.net/>) - WorldPharmaWeb is a business resource site maintained by PharmaVentures. Supports organisations worldwide in strategic planning and implementation including alliances, business development, licensing, partnering and acquisitions. Registration is free.

## Product Development

There is a range of options when pursuing assistance with product development.

The Technology and Innovation Management Centre (<http://www.business.uq.edu.au/timc/>) - The Centre conducts postgraduate teaching, research, and industry consultancy in the field of technology management.

ITEK (<http://www.itek.com.au/>) - ITEK Pty Ltd is the wholly owned commercialisation company of the University of South Australia.

Agency for Food and Fibre Sciences, DPI ([http://www.dpi.qld.gov.au/cps/rde/dpi/hs.xsl/home\\_ENA\\_HTML.htm](http://www.dpi.qld.gov.au/cps/rde/dpi/hs.xsl/home_ENA_HTML.htm)) - The Product Development team of DPI assists food companies develop new and improved food products for retail and food service markets in Australia and overseas. The team includes experienced food technologists who understand commercial deadlines.

RMIT Test Lab (<http://www.rmit.edu.au/>) - Product suitability testing, IT Product Comparison, evaluation and benchmarking, Independent arbitration for IT outsourcing contracts, Product development advice and assistance, Benchmarking validation for leading technologies and more.

Unisearch (<http://www.unisearch.com.au/>) - Unisearch Limited is your gateway to new technologies and consulting capabilities centred on the University of New South Wales (UNSW) -one of Australia's premier research-based universities.



## Investor Perspective

When seeking investment for technology company development, it is important to consider the perspective of prospective investors. Ask yourself the following questions:

### Key Questions

When seeking investment for technology company development, it is important to consider the perspective of prospective investors. Ask yourself the following questions:

What do investors expect?

Why should investors provide you with money – what is in it for them?

Investor expectations?

What are investors expecting in an investment proposition and also pitch presentation? (do you have an elevator or a 5, 10, 20 minute pitch to establish their interest? Consider the time and number of approaches they receive.)

What do investors see as critical information/factors in their consideration of any investment proposition?

What is their investment profile? (i.e. what type of investments do they make – look at their track record)

What is their risk profile? (are they risk averse or are they prepared to bear some level of risk and manage that in a proactive manner?)

How do they manage their risk profile?

How do they make their money? (i.e. how do they exit/sell out of their investment?)

What is each investor like and how do they interact in the relationships with their investee companies? (can you work with them – investors once they have invested become your partners and they will continue to have a perspective on how the company is run)

## Investor Behaviour

Investors generally have an investment mandate or field of operation and they are investing because they seek to make money for their shareholders. Some are specialists in particular sectors, some only invest in companies that are well established and fund particular activities such as expansion, mergers, acquisitions etc, others will invest in early stage companies. Each phase of company growth has been identified and those generally accepted classifications are listed on the AVCAL database. These phases are generally represented on this web site as well.

Investors also have a specifically defined fund size to be invested in their respective areas of activity and each has a particular “risk profile” associated with their investments. As fund managers are reporting to their shareholders, each will have their own risk profile which may vary over the life of their individual fund. For example, at the beginning of an investment cycle, fund managers may be seeking a wide variety of prospective investments. However as they progressively invest those funds, their “portfolio” of investments will subtly change that investment rationale. For example, if they have secured several investments of a similar type and profile, they may only wish to invest in alternate investments, to manage their level of risk exposure. So if they have several relatively high risk investments, they may wish to balance this with investments of relatively lower risk.

Each phase of company growth is associated with a particular level of risk – and the rule of thumb is generally the earlier the stage the company is at the higher the risk.

Anecdotal evidence from investors (soon to be confirmed/denied and complemented by a survey recently conducted by the AIC and DITR) indicates that the key basis for rejection of investment proposals at the earliest stages are (in order of occurrence):

If investors are interested in considering an investment, they will request further information and discuss the proposal prior to making an offer. All investment details will be subject to negotiation after an offer is made. However most of the ground work needs to be done to ensure an offer is received. Significant homework and preparation is required to ensure any chance of success.

This model is intended to assist you to provide the information you will need to include in any investment proposition, whether this investment is through equity investment (investment through shares in an incorporated company), debt finance (how do you secure your debt?), licensing to a larger company, joint venturing with a partner(s), partnering etc, the issues included in this model will need to be understood.

- poor market intelligence analysis
- poor market research and understanding of the target market and what it takes to get into and survive that market.
- the risk versus reward benefit – too much due diligence (verification of feasibility) required for the stage of investment
- lack of Management expertise and commercial track record experience
- technology and business risk – unproven technology
- poor business planning and insufficient funds requested to make the business a success.

## Funding sources available for technology development or commercialisation

Funding opportunities exist at the Federal, regional, and State levels based on stage of development, type of technology being developed, assistance needed, and other specific requirements. Types of funding include loans, joint research partnerships, grants, consortia, shared equipment and facilities, and technical assistance. Find out who is receiving grants and what grants are actually available in the Australian marketplace; also what research is currently being undertaken.

GrantsLINK (<http://www.grantslink.gov.au/>) - GrantsLINK makes it easier to find suitable and relevant Commonwealth grants. GrantsLINK also helps you find the best source of funding and assists you to complete application forms.

## Assessing the Competition

To assess your technology and its marketability you need to compare your technology and benchmark its strength against the competition. Market Intelligence is critical to understanding your competition and benchmarking your technology strength. Most likely, your prospective market is full of established competitors or potential competitors adopting new technologies. It is critical to determine as much information as possible about that existing competition to develop your strategies and to enable you to make a reliable risk assessment.

Extend your thinking beyond what products your competitors are offering and consider what they could offer. What is their technology capable of? How would you rate their capacity to innovate? Will they be occupying the space you intend to occupy?

You can find out more about your competitors with market intelligence. Resources include government programs aimed at gathering market knowledge, journals, and service providers in the market intelligence business.

There is plenty of help out there for you, a lot of it free. The key is making the time to do the research.

## Business Strategy

Business strategies for commercialisation of technologies often have specific issues associated with them over and above the critical and fundamental business concepts essential to the survival of any business.

To assess your technology and its marketability you need to compare your technology and benchmark its strength against the competition (both existing and potential future competitors). Some suggestions and questions to help you define this strength have been defined below and potential sources of information provided to assist.

Specific factors relating to your technology may have different risks/provide a different level of risk exposure to your business plans, strategies to move forward and to any potential investor or business partner you seek to develop a relationship with. You will need to identify those risks, as comprehensively as possible, and develop strategies to overcome and minimise them.

## Technology status assessment

Is the technology novelty and first/best in its class?

Consider Technology valuation estimates – comparisons with others, IRR/NPV analysis, projected revenue and cash flow analysis - Competing/alternate/substitute technologies (competitive analysis searches)

What is the potential for the future development of this field of technology?

Is the field new, increasing demand, waning/dated – what is going to be the expected case in 20 years?

Are there any special issues associated with the technology? e.g. Genetically Modified Organisms (GMOs) – are there any potential controversial or general market resistance issues.

Is an independent assessment of the technology/proposal required?

"Independent assessment" of the technology might usefully include an assessment of best IP protection strategy considering the particular marketplace.

## Strategic initiatives

When analysing your business strategy options it is important to consider new marketing strategies, processes, markets and channels of distribution.

INITIATIVE	EXAMPLE
New marketing strategies	Changing the business model to incorporate a rental model instead of an upfront payment.
New processes	Using technology to change an existing process
New markets	Moving an item from a high end product to being a disposable fashion accessory.
New channels of distribution	Using the Internet to sell a commodity that does not need transportation

## Business planning resources

A large number of web sites contain useful business planning information, a selection is provided below.

There are also a large number of private providers of business planning services who can provide business planning assistance on a consultancy basis. The AIC Service Providers database is one useful source of providers experienced in the early start up phase for new technologies.

Market Intelligence is critical to understanding your competition and benchmarking your technology strength. However it is also critical to the remaining two quadrants in the model. For simplicity in this model, market intelligence sources have been combined through dynamic links (go to next quadrant - Assessing the market) provided to guide you through the multidimensional aspects of the market issues.

## Assessing the Market

Advance® Consulting (<http://www.advanceconsulting.com.au/>) - Commercialisation and business services to industry and research institutions; and industry policy services to government agencies. Private provider.

AusIndustry (<http://www.ausindustry.gov.au/>) - Incentives for Australian businesses to foster investment and become more innovative and internationally competitive

Austrade (<http://www.austrade.gov.au/>) - Helps Australian companies win overseas business for their products and services.

Australasian Research Management Society (<http://www.researchadmin.org.au/>) - Non-profit organisation of research professionals, representing universities, hospital and medical centres, industry, government, CRC's and independent research institutes

Bio21 (<http://www.bio21.org/>) - Centre for Victorian Biotech innovation

Biotechnology Australia (<http://www.biotechnology.gov.au/>) - Coordinates non-regulatory biotechnology issues for the Commonwealth Government and seeks to provide balanced and factual information on biotechnology to the Australian community.

CSIRO (<http://www.csiro.au/>) - Connections: Contract and collaborative research, consulting, licensing, testing and accreditation.

Delphion Intellectual Property Network (<http://www.delphion.com/>) - Patent data from 70 patent offices worldwide.

Department of Innovation, Industry Science and Research (<http://www.innovation.gov.au/>) - The Australian Government's list useful web sites.

MarketResearch.com (<http://www.marketresearch.com/default.asp?SID=65435202-211191445-259059927>) - Aggregator of global business intelligence. Fee based services. Acts as a referral portal.

MicroPatent (<http://www.micropat.com/static/index.htm>) - Full-service intellectual property information, software, and consulting-services company. Private provider.

Monash Commercial (<http://www.iec.monash.edu/>) - Commercialisation services to industry

Office of Industry & Innovations (<http://www.oii.uwa.edu.au/>) - Facilitates the commercialisation of The University of Western Australia's intellectual property.

Oxford Innovation (<http://www.oxin.co.uk/>) - Business services to assist the commercial exploitation and development of innovative science and technology.

Research Innovation and Development Group (<http://www.research.unimelb.edu.au/ridg/ip/>) - Professional services designed to foster innovation, protect and manage intellectual property, and reach agreements that facilitate contract R&D and collaborative research links with industry.

Technology Licensing Office (<http://web.mit.edu/tlo/www/>) - TLO manages M.I.T.'s patenting, licensing, trademarking and copyrighting of intellectual property.

The European Commission ([http://ec.europa.eu/index\\_en.htm](http://ec.europa.eu/index_en.htm)) - Discussions and reports in "Policy Areas", Promoting Entrepreneurship and SMEs Improving Business Support Measures Benchmarking the management of incubators. Links to a Business Incubators Database.

World Intellectual Property Organization (WIPO) (<http://www.wipo.int/portal/index.html.en>) - A United nations body promoting the use of new products and services and ensuring their copyright is protected.

#### Pricing Issues

ACCC (<http://www.accc.gov.au/content/index.phtml/itemId/142>) - In broad terms, the Act covers anti-competitive and unfair market practices, mergers or acquisitions of companies, product safety/liability, and third party access to facilities of national significance.

#### **General market issues to consider**

How do the needs of this new market differ from those of your current market?

What value are you offering to the market?

How are you different from your competitors?

Why would someone use your services or products?

What is your definable competitive advantage?

What is the business model that will sustain this?

What cultural issues do you need to take into account?

Who controls the shape of the market - are there a few major players or lots of little ones?

Is the market sector defined?

Is the market undergoing growth/decline or is it stable?

Is the competitive advantage sustainable in the market?

Is there a viable market entry strategy?

Is there an appropriate commercialisation/marketing plan to achieve market targets?

Is there substantial or high growth market potential available for this technology?

## Understanding the Competition

Your prospective market is full of established competitors or potential competitors adopting new technologies and strategies to secure their survival. Rarely will there be no market where you anticipate creating a new position. It is critical to determine as much information as possible about that existing competition to develop your strategies and to enable you to make a reliable risk assessment.

Your assessment and analysis of the information you collect on these competitors may offer you potential partnering opportunities. e.g. where one company may be a minor competitor, through understanding their key drivers and company goals, levels of innovation and flexibility to take advantage of market opportunities, you may identify someone with whom to partner to enable an easier entry into your target market in a shorter time and/or even provide an earlier exit opportunity.

### Market knowledge checklist

*Print out and add your comments.*

Who are your potential customers?

What are their needs and wants?

How do they operate?

How do they make decisions and who makes them?

How might they react to a competitor in their chosen area?

What are their revenues?

How are their revenues earned? (Breakdown)

What is their pricing strategy?

What is their marketing strategy?

Are they public or private companies?

Have you researched them via their media releases, company searches, stories in the media, annual reports and other publications?

### Competitors' Innovation

Extend your thinking beyond what products your competitors are offering and consider what they could offer. What is their technology capable of? How would you rate their capacity to innovate? Will they be occupying the space you intend to occupy?

The Department of Industry, Tourism and Resources notes that "Companies are dangerously over-estimating their strength versus their competitors! They either don't know their competitors innovation capabilities or are seriously underestimating them."

You can find out more about your competitors with market intelligence. Resources include government programs aimed at gathering market knowledge, journals, and service providers in the market intelligence business.

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Australian Information and Industry Association (AIIA) (<http://www.aiia.com.au/>) - AIIA helps members to protect and improve their company's competitiveness and performance by accessing up to date information from all of our industry's stakeholders - government, industry, the media and end users.

B&T Marketing (<http://www.bandt.com.au/>) - Daily marketing, media and advertising issues and news events. B&T Marketing & Media is an online venture of the Media Group publishing arm of Reed Business Information (RBI).

Gartner (<http://www.gartner.com/>) - Gartner, Inc. is a research and advisory firm that helps more than 10,000 clients leverage technology to achieve business success. Gartner's businesses consist of Research, Consulting, Measurement, Events and Executive Programs.

IDC (<http://www.idc.com.au/>) - IDC's Go-to-Market Services (GMS) is a collection of IDC content and services packaged to complement and support the marketing, partner and sales initiatives of our customers.

IndustrySearch (<http://www.industrysearch.com.au/>) - There is a new type of business community is evolving; one that understands information is today's marketing tool of choice. Our information-based Marketplace is helping a growing number of Australian suppliers connect with their target market.

Market Intelligence Strategy Centre (<http://www.marketintelligence.com.au/index.htm>) - Independent consulting unit providing a high level of strategic research and advice. (formerly Mintel)

The Mindshifts Group (<http://www.mindshifts.com.au/>) - The MindShifts Group is the leading specialist in Environmental Scanning and Strategy in Australia, a discipline which helps organisations guard their competitive advantage by providing the necessary intelligence on which to base their strategic decisions

Pharmalicensing (<http://pharmalicensing.com/>) - Designed for business development and licensing executives, enabling the promotion and sourcing of new technology. It is an online resource for pharmaceutical and medical biotech technology licensing and collaboration.



Reuters (<http://www.reuters.com/>) - The leading source of Breaking Business News, Full News Coverage, Stock Quotes and Global Market Data.

Telsyte (<http://www.telsyte.com.au/>) - Telsyte is an independent telecommunications strategic planning consultancy/research organization. Telsyte is not aligned with any Carriers, Service Providers, Vendors or Systems Integrators. As such, our advice is always tailored to specific client needs

Trimagic (<http://www.trimagic.com.au/>) - IntelliMagic Workgroup is a powerful market intelligence product that delivers end-users with up-to-the-minute briefings on topics that are most important to them, from those that affect day-to-day decisions, to significant organisational strategy.

## Warning Signs

Here are some general warning signs – if you detect any of these you should seriously consider changing your technology focus to occupy a less crowded and more favourable environment.

*Print out and add your comments.*

Is there excess production capability in the industry?

Is there potential standardisation of products and services?

Are there many competitors?

Is the industry experiencing low growth?

Are there many possible substitutes to your technology or product?

Are there high barriers to entry such as patents, legal and market regulations?

## Competitors' Products

Pricing Quiz

*Print out and add your comments.*

Is your pricing based on value of the product to customers, not on cost of production?

Are your prices customised for differing market segment and geography?

Do your pricing decisions anticipate the reactions of competitors?

Is your pricing integrated into your enterprise strategy, positioning and goals?

## Assessing the Market

It is crucial to have a laserpoint vision of who the users and ultimate purchasers of the product/service you are developing will be.

If you are aiming for a trade sale and considering your end purchaser to be a company seek as much information as possible to identify specific target purchasers, and consider past performance to give you an idea of what is realistic?

If you are aiming for an IPO (initial public offering) what IPOs have been successful in this space recently? Technology is incorporated in many industry sectors. The industry from which the technology hails from needs to be considered as each sector has its own idiosyncrasies.

## Understanding the Culture

Who are the users and ultimate purchasers of the product/service you are developing? (ie who is going to pay money for it? Do you need to consider a push or pull strategy to reach that purchaser? Can you profile those purchasers? And how will you do it?

If you are aiming for a trade sale and considering your end purchaser to be a company (or other), as much as possible seek information on what recent deals have been done in the space of if there is a specific target purchaser, consider the past performance to give you an idea of what is realistic?

If you are aiming for an IPO (initial public offering) what IPOs have been successful in this space recently?

INTEQ (<http://www.inteq.com.au/>) - Inteq operates globally, understanding the culture and business practices of many different regions around the world and utilising up-to-date technology to ensure our clients have the information they need when they need it. Private Provider.

## Branding and Promotion

What works? You can chart the success of new technologies and then cross reference to the promotion tools these organisations utilised.

### Marketing Checklist

*Print out and add your answers.*

What brand/s are you developing and what is the strategy for each of your brands?

What currency should you be paid in? What are the terms of payment and how should you optimally manage the foreign exchange risk?

How do you know if your messages are consistent, clear and relevant to the target market.

What cultural and behavioural differences exist for your customers?

How will you manage servicing, capture after sales market data and feedback and incorporate this into your processes?

What scenario planning have you done and what different options do you have to fall back on?

How can you tell if you have the right form of packaging, brochures and other materials that suit the market, the end client base and which detail key relevant messages?

Have you obtained professional tax advice as to your obligations and how to structure overseas transactions?

What are the key risks you face and how are they best measured and managed -ie political, economic, financial, operational, strategic, regulatory, capital? How will you manage them, insure against them or mitigate and avoid them, if possible?

Are you using local management with local knowledge, contacts, language/accent, industry affiliations, etc to spearhead your entry into foreign markets?

Are you aware of the dangers of stretching supply lines to snapping point when expanding overseas?

Do you have a company-wide philosophy that thinks in a global, boundary less (rather than market specific) manner?

## Understanding the Market

Technology is incorporated in many industry sectors. The industry from which the technology hails from needs to be considered as each sector has its own idiosyncrasies.

## Technology status resources

A wide range of services are offered by private organisations aiding in the identification and development of innovative technological solutions.

Australian Academy of Technological Sciences and Engineering (<http://www.atse.org.au/>) - The Academy (ATSE) is an independent, non-government organisation dedicated to the promotion in Australia of scientific and engineering knowledge to practical purposes.

Competitive Technologies, Inc (<http://www.atse.org.au/>) - A technology transfer and licensing provider focused on the technology needs of its customers and transforming those needs into commercially viable solutions. CTT has services identifying, developing, and commercializing innovative technologies.

QPSX (<http://www.ipernica.com/>) - QPSX business is commercialising technologies, with particular emphasis on licensing and sale of intellectual property. QPSX reviews and selects technology from companies and research institutions around Australia and Asia.

Thompson CPD (<http://www.thomsonreuters.com.au/default.asp>) - Australian business to business information provider. It is CPD's vision 'to be the first on the business professional's mind for practical, easy-to-use, one-stop e-information and business solutions'. CPD is a private provider.

## Breakthrough science and frontier technologies

There is a large amount of information available on breaking developments in science and technology.

Ag Bio-Tech Info (<http://www.biotech-info.net/>) - Ag BioTech InfoNet covers all aspects of the application of biotechnology and genetic engineering in agricultural production and food processing and marketing.

AgBiotechNet (<http://www.agbiotech.net.com/index.asp?action=intro&openMenu=MainMenu>) - AgBiotechNet publishes information about agricultural biotechnology and biosafety for researchers, policy makers and industry world-wide. AgBiotechNet is a private provider. Fees apply. They have a 30-day free trial.

AgNIC (<http://www.agnic.org/>) - The University of Maryland AgNIC gateway is a guide to quality agricultural biotechnology information on the Internet. A resource for researchers, information specialists, educators, and members of the public.

Australian Academy of Science (<http://www.science.org.au/>) - Promotes science through a range of activities: recognition of outstanding contributions to science, education and public awareness, science policy, international relations, science and industry.

BioSpace (<http://www.biospace.com/>) - Provider of both public and subscription accessed life sciences information and resources.

Biotechnology Information Directory (<http://www.cato.com/index.shtml>) - Links to companies, research institutes, universities, sources of information and other directories specific to biotechnology, pharmaceutical development and related fields.

GenomeWeb (<http://www.genomeweb.com/>) - GenomeWeb.com provides of news and information covering the business and technology of genomics and bioinformatics. Free email news service. GenomeWeb, LLC also publishes the monthly magazine Genome Technology, the BioInform Newsletter, BioArray News.

Office of the Gene Technology Regulator (<http://www.ogtr.gov.au/>) - Information about the regulation of genetically modified organisms in Australia to protect the health and safety of Australians and the Australian environment by identifying and managing risks associated with gene technology.

Recombinant Capital (<http://www.recap.com/>) - Subscription to databases is a private service costing \$1000 US a year. They have a free Power Brokers of Biotech visualization tool. With it, you can see the interconnectness of 1,500+ biotech, pharma and medical device companies.

SIGNALS Magazine (<http://www.signalsmag.com/signalsmag.nsf>) - An online magazine of biotechnology industry analysis published by Recombinant Capital. Signals magazine is free.

Manual of Classification of Patents (<http://www.ibiblio.org/patents/>) - In the Index to the Classification you can determine the class of your idea by searching keywords.

## Smart information use

Links to international and national organisations aimed at accelerating and assisting with technological innovations.

CincyTechUSA (<http://www.cincytechventures.com/>) - The goals of CincyTechUSA are to accelerate the growth of technology in our region, creating new tech-based opportunities, which build value for the Cincinnati USA community.

Paritech (<http://www.paritech.com.au/default-au.htm>) - Paritech is a private provider, based in Melbourne Australia offering charting software for technical analysis and market explorations.

## End User Information

### News

Collection of links to industry reports, newsletters, research studies and more.

Asiabiotech (<http://www.asiabiotech.com/>) - Fortnightly report on pharmaceuticals, health care, food and agriculture in the Asia-Pacific region.

Business Communications Company (<http://www.buscom.com/>) - Industry reports, newsletters and conferences on advanced materials, high-technology systems and components, and novel processing methods. Private provider.

FEAST (<http://www.feast.org/>) - Forum for European-Australian Science and Technology Cooperation. Library has links to research priorities.

Freedonia (<http://www.freedoniagroup.com/Default.aspx?AspxAutoDetectCookieSupport=1>) - Commercial publisher of research studies including product and market forecasts, industry trends, threats and opportunities, competitive strategies, market share determinations and company profiles. Private provider.

## Entering the Market

Having reached the market entry phase, there are many choices still to be made. Selecting and gaining access to appropriate distribution channels is one of the most important issues. It is vital that you map out the path to your end client.

To assist this process, there are choices to make regarding strategic partnerships, process improvements, routes to market, sales and advertising among many others.

Provided here are data sources that will provide information both statistical and market related to help make these choices.

There are a significant number of data sources that will provide information both statistical and market related.

Additionally there is general 'market entry news' and links to providers of market entry assistance'.

## Partnerships

Partnerships, process improvements to deliver better productivity and price to market, routes to market, distribution channels, sales, advertising and promotion etc are components to consider as part of strategies to enter the market.

There are a significant number of data sources that will provide information both statistical and market related.

It may be that an appropriate strategy to do this may be to license or sell direct to a distributor as an exit pathway at this stage.

## Partnership Questionnaire

*Print out and add your comments.*

Is there a potential for business clustering in your industry or region?

Is there a local purchasing policy that would encourage a whole sector?

What skill sets that you don't have could be provided by partners?

If training, skills development and information gathering is beyond your reach, is there a general need in other organisations with whom you could share the costs.

Can you piggyback onto existing brands and market position?

## Partnership news, guides and resources

Forming strategic partnerships can be a very effective way of ensuring successful entry into the market.

Alchemia - Partnerships and Alliances (<http://www.alchemia.com.au/irm/content/home.html>) - Alchemia is seeking partnerships within the pharmaceutical and biotechnology industries.

Partnerships in Biotechnology (<http://www.regional.org.au/au/gcirc/6/701.htm>) - Monsanto is creating a network of partnerships and collaborations in the Global Canola/Rapeseed/Mustard and specialty Brassica businesses to develop new value opportunities with this global crop.

Zernike Australia (<http://www.zernikeaustralia.com.au/>) - An international, dynamic organisation specialising in the commercialisation of technology and management of seed capital funds and facilities. Zernike Australia offers a broad range of services to help companies commercialise innovative technology.

## Route to Market

### Market Entry News

Useful links providing news on market entry and related issues.

Biotech Queensland (<http://www.dtrdi.qld.gov.au/dsdweb/v4/apps/web/content.cfm?id=1581>) - Biotech Queensland provide a guide to technology commercialisation grants and assistance in order to manage technological innovation and its commercialisation, product development and to market entry activities.

Business Adviser

(<http://www.ausindustry.gov.au/content/azindex.cfm?Keyword=business%20adviser>) - AusIndustry's news resources - business adviser.

Market (<http://www.ausindustry.gov.au/content/azindex.cfm?Keyword=market>) - AusIndustry's news resources - market.

### Market Entry Assistance

Links to both private and public government organisations providing assistance in market entry and gaining investment.

Invetech (<http://www.vsl.com.au/>) - Provider of technology based "idea to market" services. Part of Vision Systems, a technology-based company in high technology markets. The company invests in product development within high growth sectors.

Austrade (<http://www.austrade.gov.au/>) - AusIndustry also provides a number of products which assist companies to look at product/ process improvements and entry into overseas markets.

### Process Improvement

To deliver gains to your organisation and customers it is essential to consider and research process improvement.

CRUX Cybernetics ([http://www.cybernetics.com.au/html/tt\\_process.html](http://www.cybernetics.com.au/html/tt_process.html)) - An article on process improvement from a company involved in technology for collaborative Business Management & Scheduling

MicrOz (<http://www.microz.com.au/OD%2001%20-%20index.html>) - Process improvement through better use of knowledge - a service offered by MicrOz. A business perspective.

Production Process Improvement (<http://www.cmis.csiro.au/PPI/>) - CSIRO wing, the Production Process Improvement (PPI) group delivers solutions to industry through activities like consultancies, training, research and secondments of staff to industry.