

Market Assessment Projects
Typical Methodology
Noulan Bowker, P.Eng., CMC
www.strategynavigator.com

1 Overview and General Approach

1.1 Purpose for Having a Market Assessment Done

Noulan's clients have included and ranged from large companies to one person startups to university research groups. The main reasons Noulan's clients have commissioned him to perform a Market Assessment have included the following:

- Gain an objective and detailed view and understanding of the company's strengths, weaknesses, opportunities and threats
- Assist management to create a viable business strategy, in particular product and marketing strategies. Very often achieving optimum focus is the key factor.
- Provide independent validation of the company's business opportunity for the purpose of attracting outside financing (see: www.strategynavigator.com/pdfs/A_Rising_Star_-_Ostara_from_NRC_IRAP_Website.pdf - an article from the NRC IRAP website on Ostara Nutrient Recovery Technologies Inc., for which Noulan completed two positive Market Assessments)
- Meeting the requirements of NRC IRAP or NSERC for independent validation of the commercial opportunity for a new technology for accessing government financial assistance for research and development. See copy of NRC IRAP presentation on financial support programs for technology startups at http://www.strategynavigator.com/pdfs/Summary_of_Government_Funding_Programs-Presentation_November_30_2011.pdf
- The initial phase of an extended program for a company of marketing support or actual business development
- Obtain customer requirements as input for product development
- Obtain independent and frank feedback from customers and partners as input for a business turnaround or development of a new business strategy

1.2 How To Apply for Government Funding Assistance

There are 3 sources of federal government funding assistance that Noulan's clients have utilized to engage his services

1.2.1 The MAS Program - NRC IRAP funding provided through CMC Canada

The MAS (Management Advisory Services) program operated by CMC Canada for NRC will fully fund a week's worth of consulting to small technology firms. This program allows a

company to quickly, easily and very economically access Noulan's help. He has performed a number of MAS projects, in which his objective feedback and advice have helped the clients in several ways, including accessing additional government funding for follow-on projects. Details about the MAS program and how to apply for it can be accessed by clicking on

<http://www.strategynavigator.com/MAS%20Program.html>

1.2.2 NRC IRAP Market Assessment Program

Full NRC IRAP assisted Market Assessments are conducted according to the methodology described in this document. They are designed for small businesses ranging from one person start-ups to those with up to 100 employees or so. They are accessed by contacting the NRC IRAP office and engaging with an IRAP Industry Technology Advisor who is most appropriate because he or she is either local or has expertise with the relevant technology or market. The IRAP Marketing Assessment program will fund up to 75% of a project or \$22,500, whichever is less. Typical projects Noulan has conducted for startups have often been \$30k and up to \$50k for projects for going-concern companies.

1.2.3 NSERC

Market Assessments for the NSERC (Natural Science and Engineering Research Council) I2I (Idea to Innovation) program are also conducted largely according to the methodology described in this document. As NSERC only funds university projects that are purely technical research the market assessment are typically less complex and have less scope than those for industry. They have a maximum budget of \$20,000, of which the university must contribute 25% and NSERC contributes 75%. The NSERC Market Assessments are managed by the Industry Liaison Office of the University for the research group.

1.3 Overview of Methodology

Part of the Consultant's general approach to market research and strategy formulation is described in some detail in Chapter Two of *Celebrate Marketing*, a pdf file copy of which may be downloaded through the following

link:http://www.strategynavigator.com/pdfs/Celebrate%20Marketing_-_What_is_Your_Customer_Really_Buying.pdf

The budget for Noulan's Market Assessment projects have ranged from \$20,000 to \$50,000, depending on the scope and whether or not travel is required.

The outside interviews are usually the most important sources of information. A significant level of effort is involved in identifying the best interviewees for the types of information sought, in arranging the appointments and in getting the most out of these interviews. Additional information on the outside interview program is provided later in this section.

A key aspect of the overall approach is to identify any potential "Show Stoppers", such as lack of practical or economic feasibility in scaling the technology up from the lab to be a viable

industrial process, lack of market need or overwhelming competition. Sometimes, when the originally conceived opportunity is found to not be viable for some reason, it is possible to identify and qualify an alternative application and market.

2 Summary of the Tasks in the Methodology

Although the following activities are provided in a particular order, in fact most of them are not pursued in the linear fashion they are presented. Many are conducted concurrently or in iterative loops, to adjust the approach as more is learned during the course of the investigation.

- **Familiarization** – Perform an intensive review of the reports, documents and information that can be supplied by the research team and the Client. Conduct intensive interviews with those who are already familiar with this technology, at The Client and elsewhere.
- **Outside Literature Search and Review** – Information from the Internet, from referrals and searches
- **Outside Interview Program** – This will be the most important aspect of the project for obtaining the most valuable information, ideas and suggestions. Interviewees will include potential licensees, customers, partners and “experts” in the process, application and commercialization domains. Typically, 20 to 30 interviews of 20 to 90 minutes each are involved with a project of this scope – mainly by telephone.
- **Project Review Meetings** Project review meetings with the Client and the principal investigator of the project will be held at the beginning of the project, around the midpoint, just before producing the final report to discuss findings and strategies and also after delivery of it, if required. Additional communication will take place throughout the project by email, by phone or in person as required.
- **Information Analysis** will commence at the beginning of the project and be conducted continuously. By about half-way through the project we expect to be focused on the best 2 or 3 market segments. Market segmentation and a SWOT-type analysis will aid in this process and will be presented in the final report.
- **Preparation of Mid-Project Report** –a brief report will be provided about the mid-point of the project
- **Preparation of Final Report** – The final report will be presented in both written and oral forms. It will include the detailed findings, information sources, a SWOT analysis and recommendations for commercialization and the R&D program

3 Details of the Methodology and Statement of Work

3.1 Analysis Considerations

Analysis will be an on-going process and will help direct the course of the investigation. The challenge is to collect information that is useful, rather than just raw data, the relevance of which is difficult to determine.

The market will be segmented according to categories that are determined to be relevant and the segments prioritized for determining and characterizing the best target market opportunities.

A SWOT (Strengths, Weaknesses, Opportunities and Threats) Analysis will be conducted and included in the final report.

Although published information will certainly be sought and used, perhaps the most helpful information will come from interviews with knowledgeable people, because they not only provide useful data, but also engage with the interviewer and help analyze the situation. The analysis process starts on the first day of the project and continues through to the end.

3.2 Marketing and Product Strategy Model

Although for simplicity, the recommended strategy may not be presented in the final report according to the following Strategy Model template, it is in fact the model that The Consultant will use as an aid and checklist to guide the research and analysis and make the product, marketing and business strategy recommendations.

- Select best applications and related market segments to **focus** on by priority
- Establish market **positioning** - i.e., how the product and the company is to be perceived by the customer compared to the competition
- **Distribution Channel and Partnering** Selection – How should the product and/or services be sold and what types of technical and marketing partners would be suitable?
- **Product Definition** - packaging, features, and services required – what different process and support equipment will be required for different types of applications and customer types? - For a more detailed breakdown of the “Whole Product” Model, see below
- **Promotional Approach** – the **message** that is required for each component of the **audience**, which comprises decision makers and influencers in end-user, sales channel and strategic partnering organizations. The most effective **media** must be selected to most effectively and efficiently reach each of the key audience components
- **Business Development Roadmap** – How the Market Entry and Development Strategy develops over the planning period

3.2.1 The “Whole Product” Model

Identify and characterize the **Whole Product Model**, comprising

1. **Core Product**
2. **Application**
3. **Value Proposition**
4. **Support Services**
5. **Standards**
6. **Externally Supplied Items**
7. **Deal – (including pricing)**
8. **Trust**
9. **Product Roadmap**

Note: Descriptions of the above product components are provided in Chapter Two of *Celebrate Marketing*, a copy of which has been supplied with this proposal

4 Project Start-Up Procedures

This contract will come into effect and the Consultant will commence work on this project after he has received:

- Signing of the contract
- The cheque for the first payment.
- Provision of a copy of the letter that it receives from the funding supporter (eg IRAP) providing notification of the award of the Market Assessment grant.

The Consultant, The Client representative and Principal Researcher will initiate the project by meeting to review the Objectives, Statement of Work and the Schedule for the project and to initiate the Familiarization process.

5 Familiarization – “Internal” Investigation

For the purposes of this project, “Internal” refers to documents held and information known by both The Client personnel and people they know who are already familiar with the technology.

The Consultant must gain a reasonably detailed understanding of the specific technology in question, the contributing technologies and each of the candidate applications, so that he can fully appreciate the business issues associated with them.

Sometimes certain technical details can have a significant positive or negative impact on the business opportunity. This understanding will initially come from studying documentation and literature provided by the Principal Researcher and the Client, from intensive conversations with all the The Client people involved in the project and from talking with the people who are

associated with The Client and understand the technology and its current and potential applications.

5.1 Review of literature and written information available from The Client

One of the first things the Consultant will need in this project is any information that will assist him in efficiently proceeding with the investigation, including: lists from both the The Client Research group and Client of people who can provide additional insight and other sources of information. More information is better than too little. It is better to include information that may seem of marginal interest early on but in fact might provide clues that would be of value to the investigation. The following types of information will be sought and carefully reviewed for applicable content and leads to additional sources of information:

- Information on the technology and how it might be developed into an industrial grade product or service
- Market information already obtained
- Marketing, product and business strategy and planning documents
- General industry literature
- Competitive information
- Information on potential customers and partners
- Names, and to the extent possible of people that are either candidate interviewees: email addresses, phone and fax numbers of general industry contacts - e.g.: "experts" and other known or suspected sources of further information
- The names of companies , people, organizations that are known to have useful market and competitive information and Website URLs that provide links to useful of sources of information.

5.2 Internal Interviews

For efficiency and in order to maximize the benefits of this project, it will be very helpful for the Consultant to first learn as much as he can from The Client and others at The Client about the technology, its applications and commercial potential.

“Internal” Interview candidates will include:

- All those who are currently in the research group, or have at any time in the past been involved in the project
- Other people at The Client and close outside associates, who already have some understanding of either this technology or technologies that are related

6 Outside Market Investigation

6.1 Review of Externally Sourced Literature

Additional published information will be sought at the beginning of the project and then periodically throughout. Information gained in the interviews is used to narrow the search for additional literature. Often interviewees provide or help identify very useful documents or information sources.

The Internet will be the most important source for obtaining published information and for identifying and qualifying potential interviewees. Other databases, available only on a fee basis either on the Internet or in other media, may also be used.

6.2 Outside Interview Program

The outside interview program forms the core of the research. Typically, much of the information sought and much of the most useful insight obtained for assessing novel technologies mainly exists in the form of perceptions in the minds of experts, decision-makers and decision influencers in relevant industry and government organizations. Such interview programs tend to take on a life of their own. They proceed naturally by networking, starting with the initial contacts.

6.2.1 Selection of Interviewees

Generally projects of this scope involve about 20 to 30 outside interviews, mainly by telephone. Typically interviews in person are more productive, but depending on the technology and the market, the number of good interview candidates in the Vancouver area is usually limited and so most of the outside interviews must be conducted by telephone. The exact number of outside interviews can vary considerably, depending on the quality and quantity of useful information obtained from each interview. Telephone Interviews generally run from 20 to 90 minutes each, with 45 minutes perhaps being average. The length of the interview is not necessarily a direct indicator of its value.

The following is a partial representative list of potential interviewee categories for this project. During the course of the project, additional types of organizations and people may well be identified and some on this list may not be included. In general, interview candidates will be familiar with one or more of electroplating technologies, other coating techniques or relevant end-use applications. The following are the types of organizations and people that will be considered and likely included for interviewing:

- People in government organizations, such as NRC, Industry Canada or American government organizations (e.g. National Labs) that can provide useful information on related technologies, applications and suggestions for people to talk to in industry

- Academics in the US and Canada who may have useful information or views
- Organizations already using other equipment and methods to perform the candidate applications
- Original equipment manufacturers (OEMs) or system integrators who could incorporate the technology into their products and services
- Suppliers of equipment that is currently used for the applications—who are potential competitors, partners, customers, acquisition prospects
- Service providers who use similar equipment to provide services instead of product to end user customers
- Leaders in industry associations of both equipment providers or end users that deal with the relevant technologies and applications
- Editors and contributing writers to technical journals that address the technology or the applications
- People in companies having similar but non-competing products or services for the same potential customers.

The interviewing outside the immediate circle will start with people closer to home and who do not represent either competition or serious market opportunities – and then move outwards – that is, geographically and to companies that represent prospective customers, partners and competitors.

The number of interviewees from each the above categories will depend on what is required to best meet the goals and objectives of the project. Sometimes one or two interviews will yield a great amount of valuable information and sometimes it takes a number of interviews to get adequate information in certain categories.

6.2.2 Interview Program Management and Techniques

In order to get interviews with the best people, I implement a well organized and somewhat formal interview program process. Whenever possible, I ask for interviews through referrals from people the interview candidate knows and respects. Thus in every interview I ask for referrals for additional people to interview. If I cannot get a referral to someone I want to interview I try to engage their interest through the content of the email or fax requesting the interview. Also, I try to get interviews by appointment, rather than by cold-calling. Sometimes cold calling is necessary, but better results typically come from getting the interviewees to commit time in advance and by providing them in advance with information on the subject matter and the nature of the information sought.

At the beginning of the project I set up a data base in Excel to manage the research process. I capture all the names and contact information for people who may be interview candidates and also the names and website URLs of organizations that may be potential customers, competitors, partners or sources of information, such as the websites of industry associations and journals.

I set up a special private directory on my website (e.g: www.strategynavigator.com/moly) to provide interview prospects with a description of the technology and how the The Client

research group believes that it could be used and of value. Any documents, such as papers already published by the researcher on the subject are also provided in this website directory in pdf form.

I send prospective interviewees an email or fax asking for an interview appointment, either in person or by phone as appropriate. Before sending this email I investigate the interviewee and their organization through the Internet to understand what sort of information I am likely to get from them and what the nature of their interest in the technology might be. I use this information to catch the interview prospect's interest through a description of the technology and its benefits in a way that appears to be of relevance to his organization and work. The name of person referring me to the prospect along with a short phrase to engage their interest is always in the subject line of the email and included in the first few words of the text. This introductory letter of no more than one page includes a very brief version of the description of the technology and its proposed value and the interview agenda. This email/fax includes a link to the website described above that provides more detailed information. In the email I say that I will phone them shortly to ask for an appointment time – or, alternatively, if they prefer, to reply to the email to suggest convenient times for an appointment.

Through Google Analytics I can often track who has looked at this web page. I then follow up with a phone call either to initiate the interview if convenient at that time or to ask for a more convenient interview appointment time. If I do not connect, I follow up with additional emails and phone calls and voicemail messages periodically until I either succeed in getting an interview or it becomes apparent the prospect does not wish to engage. I keep track of all this activity on the project database spreadsheet.

By using this process, the hit rate and the quality of the interviews is usually very good. It is not uncommon to get quite lengthy and highly productive interviews with people at the vice president level or higher in quite large companies.

6.2.3 The Interview Process

I open the interviews by clearly establishing that I am not selling anything at this stage but instead I am conducting a government funded independent assessment for a product in development and looking for frank feedback, useful information and suggestions from the interview subject. In actual fact, this is probably the most effective way to initiate what will later and ultimately be part of a selling process – networking to attract interest and cooperation from prospective influencers and actual prospects.

Typically people like to talk about their work, give advice and gain advance information about new developments in their field of interest. The interview is like a natural conversation instead of a structured series of questions and answers. Two key techniques for success in interviewing are: first to establish rapport and second for the interviewer to do far more listening than talking. I try not to fill the silences and often wait for the next thought from the interviewee.

In fact, quite often the most important information obtained in interviews does not come in response to a particular question. Thus I do not have a set list of specific questions which I strictly follow, but rather I prepare a very short list of information objectives in advance, that is specific to each interviewee. The key is to get the person talking with what they think is most important, nudging the conversation along to stay generally on track, using short comments and open-ended questions. I always end by asking them what else I should ask them – what else we should be thinking about - and this sometimes results in great information and insights. The result is I often get quite long interviews with quite senior people and gain a lot of valuable information not available anywhere in writing. I always ask for onward referrals for additional people to interview.

I take detailed handwritten notes throughout every interview. During the course of the interview, to the extent I can without reducing rapport or interrupting the flow, I ask the interviewee to clarify details to facilitate future follow up, such as: name spellings, the meaning of unknown acronyms and explanations of complex concepts or information that I have not understood. A byproduct of my interest in detail is the interviewees appear to like that I am genuinely interested in what they have to say.

Often the information obtained from different interviewees is apparently contradictory, or partially contradictory. If it appears to be important, this is resolved through asking for the same information from several interviewees until a clear majority provide the same information or it becomes clear that there actually are two or more separate issues involved, actual differences in opinion or differences in perception of the facts on the matter – any of which is useful information in itself.

6.2.4 Market Characteristics and Market Size

Unlike with consumer markets or large commercial markets, it is not possible to get enough data points to have anything remotely valid from a statistical point of view. However, it is still reasonable to classify potential customers into groups that represent “markets”, based on the definition that a market is a group of customers (however small) who reference each other when buying and have similar views.

The estimation of market size for novel industrial products for niche applications is also not an exact science. One can usually answer the question as to whether it is “big enough” to justify commercialization. Market reports from market research organizations such as Frost and Sullivan are useful and give information on a larger market of which the market niche in question is a part. It is often possible to get summaries, quotes or excerpts from these. Also, sometimes IRAP or other government organizations can provide such reports in whole or in part. Typically there are several websites that together provide enough information in report summaries, excerpts and industry news to be useful. By combining these published sources of

information and the views of the interviewees it is usually possible to come up with reasonably useful profiles of the target markets and the magnitude of the target market opportunities.

7 Project Review Meetings

The Consultant will speak with the Client representative and the principal researcher during the course of the project in person and by telephone as required to review results and to discuss the continuing course of action and scheduling. The first such meeting will take place at the commencement of the project, in order to review objectives, schedule in-house interviews and plan the outside interview program.

8 Mid-Project Report and Review Discussion

A brief report in point form will be provided approximately halfway through the project. The Consultant will deliver this report to the Client representative and the Principal Researcher and facilitate a meeting to discuss the findings to date and agree on the strategy for conducting the balance of the project.

The Mid-project report and discussion will include:

- Identification of any serious obstacles to the prospects for successful commercialization
- Identification of the market segments that represent the best opportunities found thus far in terms of applications and customer types.
- A summary and preliminary analysis of the information obtained thus far.
- Recommendations for any revisions required to the focus, scope or Statement of Work for the second half of the project.
- Identification of any additional particular types of information that need to be obtained.
- Refinement of the initial hypothesis for the nature of the market and competition and for the product and marketing strategy.

9 Production of a Summary Report for Strategy Discussion

Upon completion of the market research and analysis, a summary in point form of the proposed Market Assessment Project Final Report will be produced and sent to the Client representative and the Principal Researcher. It will include a summary of the market assessment findings and strategic recommendations to serve as a framework for a discussion to decide on the most appropriate business models and the associated product, marketing and commercialization strategies.

10 Presentation of Market Assessment Results and Discussion

The Consultant will give an oral presentation of his findings and facilitate a “brainstorming” session to discuss the project results and the proposed business model and strategy options.

11 Production of the Draft Final Report

The detailed findings of the study and the outcome of the brainstorming session will be incorporated to produce a draft of the Market Assessment Project Final Report. This draft will be submitted by email to the Client representative for a brief discussion by phone and possible revisions.

12 Production of the Final Market Assessment Report

- Produce a final Market Assessment Report that incorporates the outcome of the discussion and meets the requirements of the funding program. This will include sections on:
 - The make-up and magnitude of the market opportunities.
 - The competition and business environment for each of the above market segments
 - Discussion, analysis and recommendations from the business models examined, including target markets to be focused on and competitive positioning and sales channels for each
 - A “SWOT Analysis, which summarizes the findings in terms of Strengths, Weaknesses, Opportunities and Threats
- Provide a copy of the Excel contact database spreadsheet created for the project, which documents the sources of information and contacts. This will assist in on-going business development, information gathering and monitoring.

After the final revisions have been made the final report will be delivered by email to the Client representative and the Principal Researcher as a pdf document attachment.

A copy of the contact database generated during the project will also be provided in digital form as an Excel spreadsheet file. This will serve as a useful source of information for prospecting and as an on-going information-gathering tool for the company.

Copies of information obtained in digital form during the project will also be provided on a DVD to The Client.