



# Generating Quality Technology Profiles



DeltaTech-Korea Ltd.

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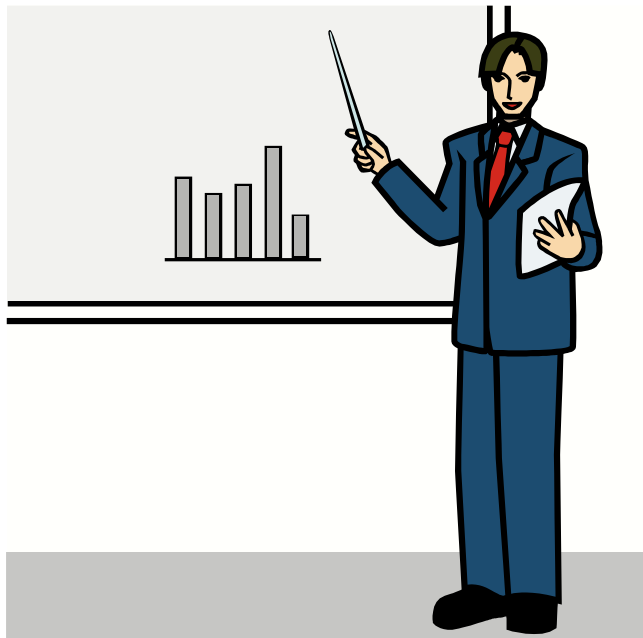
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# I. Technology Transfer



1. What is TT
2. When it Take Place
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# 1. What is TT

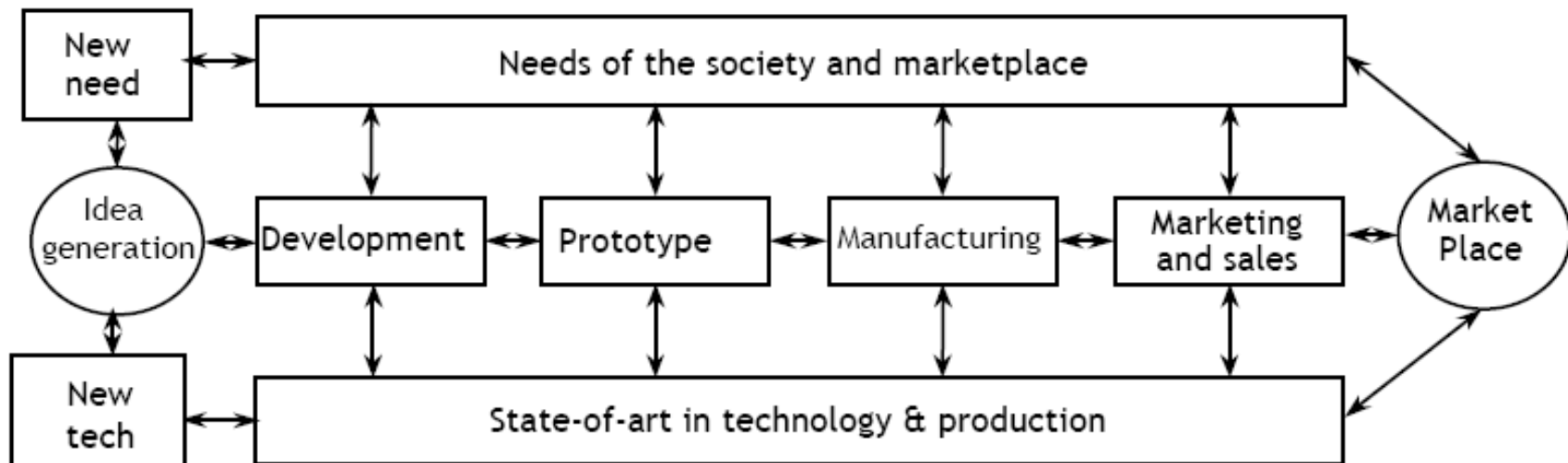


- Movement of know-how, technical knowledge and/or technology from one (or more) source (termed “donor”) to another entity (termed “recipient”).
- The successful application and/or adaptation of an innovative technology developed in one organisation to meet the needs of one or more other organisations.

## 2. When it take place



- At any stage of the innovation process



*Adapted from Chiesa V., "R&D Strategy and Organizations", Imperial College Press, 2001, pag.6*



### 3. Markets for Technologies (1/3)



- They are markets that favour the matching between technological demand and supply. Therefore, markets for “unrelated parties”. Important role played by intermediaries (like you!).

#### Types of transaction

- According to the degree of development of a technology:
  - transactions for the creation of new technology
  - transactions for the commercial use and the diffusion of technologies
- According to the type of parties involved:
  - Vertical
  - Horizontal

	<i>Existing Technology</i>	<i>Future Technology or Component for Future</i>
<i>Horizontal market/Transaction with actual or potential rivals</i>	Union Carbide licensing polyethylene technology to Huntsman Chemicals	Sun licensing Java to IBM; R&D JV between rivals
<i>Vertical market</i>	Licensing of IP Core in semiconductors	R&D JV; Affymax licensing combinatoric technology to pharma company

*Adapted from Arora F., Fosfuri A., Gambardella A., “Markets for technology. The Economics of Innovation and Corporate Strategy”, MIT press, 2001, pag.8*

### 3. Markets for Technologies (2/3)



#### Reasons to collaborate

1. need to improve one's "strategic" position
2. need to enhance one's technical capabilities.

Starting point for establishing a TT collaboration:

#### *Strategic planning*

- Analysis of strengths and weaknesses, as well as external environment (SWOT analysis);
- Strategy formulation (according to the results of the SWOT analysis);
- Execution of the strategy.

### 3. Markets for Technologies (3/3)



#### Transfer medium

The vehicle, formal or informal, by which the technology is transferred.

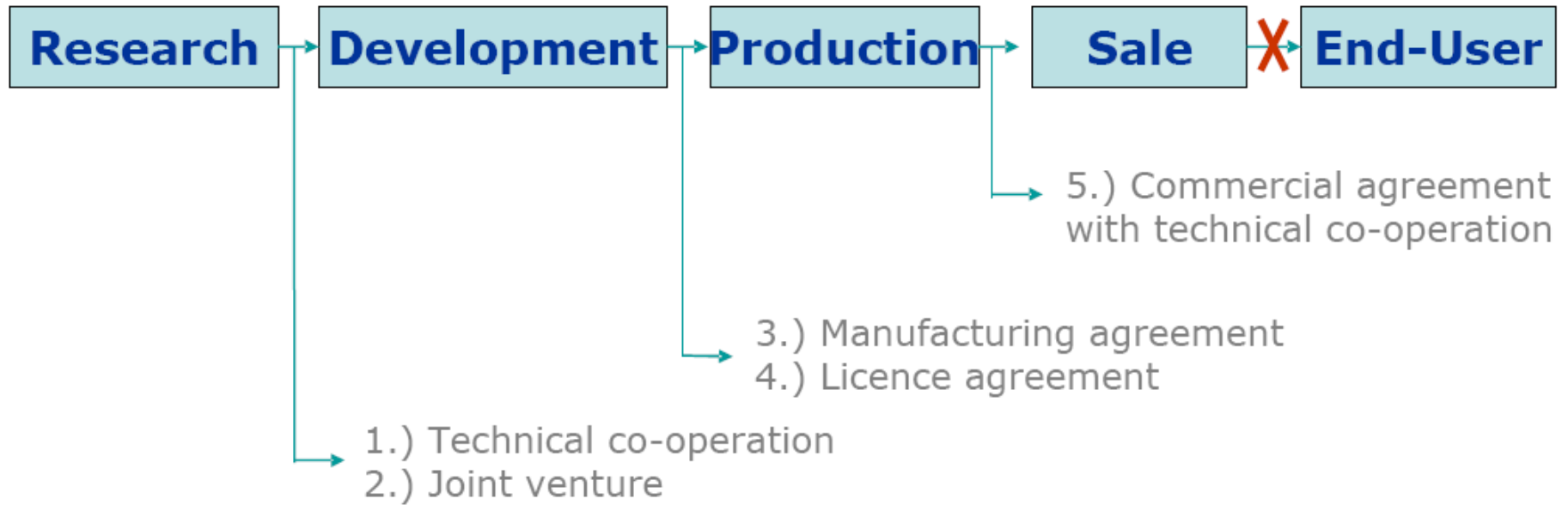
#### *Types of agreement*

- Licensing agreement
- Technical Cooperation
- Joint Venture
- Manufacturing agreement
- Commercial agreement with technical assistance

*The optioned route (channel) to TT should be part of the strategy.*



# 4. Types of Agreements (1/2)



## 4. Types of Agreements (2/2)



### Licensing agreement

Product license (e.g. franchising) versus technology (e.g. IP) license.

### *Technical cooperation*

- Adapt a technology, a product or a process for a new application or sector.
- Develop a technology, a product or a process to meet new market needs.

### Joint Venture

Formalized link between entities, with the sharing of sensitive information, resources and assets.

### Commercial agreement with technical assistance

Ensuring effective start-up and/or maintenance and/or installation of the transferred technology.

### Manufacturing Agreement

Subcontracting & Co-contracting

# 5. Examples

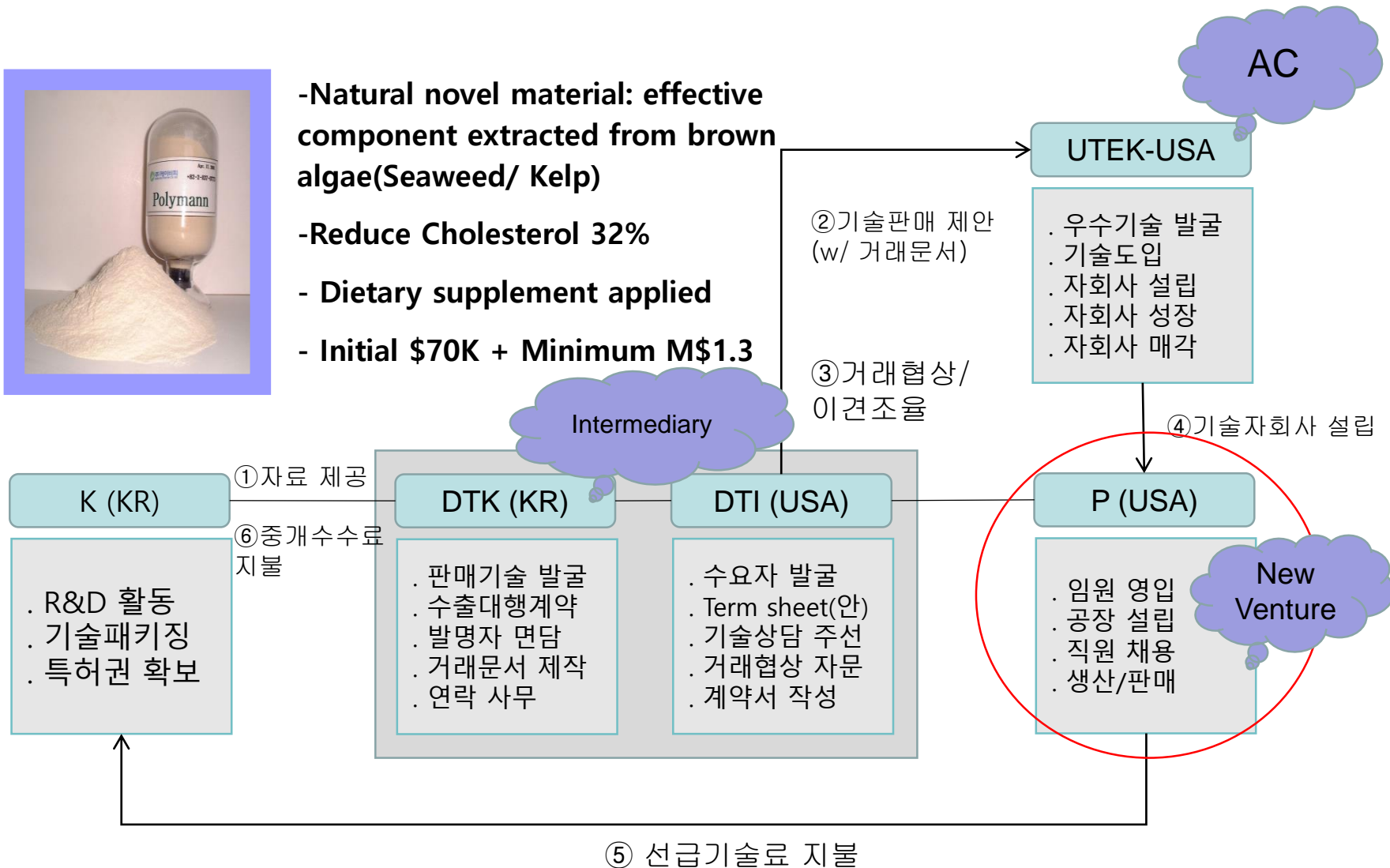


-Natural novel material: effective component extracted from brown algae(Seaweed/ Kelp)

-Reduce Cholesterol 32%

- Dietary supplement applied

- Initial \$70K + Minimum M\$1.3





## II. Company Visit



1. Meeting Preparations
2. Conversation Course
3. Company Introduction
4. Identify the Needs
5. Proposal of a Solution/ Offer
6. Meeting Minutes
7. Example

# 1. Meeting Preparations



- Where is the company's head office: In-person vs Virtual
- Company employee with decision making power
- Confirm the appointment in writing
- Arrive at least 10 minutes earlier
- Take with you examples of technology profiles, program slide deck, flyers for TT services or R&D grants, OI platforms,
- Current events which might be interest to the customer
- Success stories as illustrative material
- Take a laptop with you and complete an innovation or TT audit

## 2. Conversation Course



- Create a relationship of trust, use the same “language” as the other party
- Be responsive to the other party: Let him/her do the talking, ask questions → It is better to obtain lots of information than to give a lecture (in particular when conducting an audit). During the conversation discuss the individual programs and proposals together with the other party
- At the end of the conversation
  - : summarize the individual interim conclusions once more and
  - : set out the next steps (eg., sending of further documents)



# 3. Company Introduction



1. Sphere of activity	<ul style="list-style-type: none"><li>a. Research &amp; Development</li><li>b. Sector</li><li>c. Customer consulting in relation to project planning</li><li>d. Marketing</li></ul>
2. Number of employees	<ul style="list-style-type: none"><li>a. At the location</li><li>b. Working in R&amp;D</li><li>c. In total</li></ul>
3. Turnover (Optional)	<ul style="list-style-type: none"><li>a. Export sales (in %)</li><li>b. R&amp;D Investment (in %)</li></ul>
4. Year of Establishment	
5. Products/ Services and applications	<ul style="list-style-type: none"><li>a. Standard products</li><li>b. Bespoke products/ services or specialist equipment tailored to the customer's use</li><li>c. USPs of the product/ service</li></ul>
6. Type of customer	<ul style="list-style-type: none"><li>a. Large group of companies</li><li>b. SME</li><li>c. Public contracting authorities</li></ul>
7. Market	<ul style="list-style-type: none"><li>a. Niche market</li><li>b. Volume market</li><li>c. National/ International</li></ul>

# 4. Identify the need



- An actual ongoing project or a project in the observation stage

## 1. General description

### 2. Project Type

- a. Technology Project
  - : Patent/ Supplier search
  - : R&D Project
  - : R&D activities as a partner
  - : Global R&D project
  - : Looking for partner for my global project
- b. Commercial Project

### 3. State of progress

- a. Proposal requiring further specification
- b. Consideration with objective defined
- c. Structured project – action plan available
- d. Project already formulated, partner(s) available
- e. Application for funding

### 4. Any action taken

- a. Making initial contact
- b. Market analysis
- c. Internet and/or database research
- d. Action has already been taken, but without any success
- e. Other similar experiences

# 4. Identify the need



- International cooperation

1. Short description of the innovative products/ services
  - : How has marketing been conducted to date?
  - : Which technologies are used?
  - : What are the target markets? Regional/ Sector-specific
2. Is the product/ service already in use?
3. What kind of cooperation partners is being sought?  
(Financing, academic, industrial partners)
4. Does a prototype already exist and has it been tested yet?

## 5. Proposal of a solution/ offer



1. Summarize your understanding of the project in a few sentences in order to ensure that you have identified the precise needs
2. Make a specific proposal of assistance or an offer of service in relation to the project identified, which will be able to keep in contact with the company.
3. Suggest the services which most closely match the company's needs.
4. Draw up a list of specific actions which must be taken in the following weeks.

# 6. Meeting Minutes



## 1. General information about the company

## 2. Outcomes of the visit

- : Offer of support in applying for funding
- : Partner profile for partner search
- : Production of a tailor-made TO/TR
- : Interest in TO/TR from abroad
- : Partner platforms/ Company trips
- : Interest in an innovations audit
- : The company is not yet ready to operate at international level, so contact again in months.

## 3. Assessment of the funds to be raised

- : Duration and costs
- : Skills profiles of the expert or consultant to be contacted

## 4. Follow-up

- : Any information promised should be with the customer 2 days after the company visit
- : Regular contact should be maintained with the customer
- : Information should be provided regularly on events/ public notices/ TO/TR

# 7. Example



COMPANY: T-Vietnam		DATE: 2015	VERSION: 1.0
<b>0. INNOVATION NEED:</b>  Coal-based boiler emitted lots of CO <sup>2</sup> gase (GHG), producing rymen and noodle  Coal cost was on the rise			
<b>1. ROLE</b> <b>QUALITATIVE VISION</b> : Less GHG-emitting & cost-effici ent factory operation		<b>2. FIELD</b> Production operation on-site	<b>3. TYPE</b> • Process Innovation
<b>4. TARGETS</b> <b>QUANTITATIVE TARGETS</b> • Duration: 1 years(2015) • KPIs: GHS emission reduction (8,590 ton/ yr)/ Fuel cost 33% ↓		<b>6. PLATFORMS &amp; TOOLS</b> • Korean TT Consultant • ASEIC'Eco-Innovation Consulting'	
<b>5. MARKET ENTRY</b>  •Pioneer		<b>7. IMPLEMENTATION</b> • Replace Bio-fuel based boiler • Fuel: Rice hull ( Vietnam: in plentiful supply)	



# 7. Example



Conventional Coal – Based Boiler



Bio-Fuel Boiler using Rice Hulls





### III. Technology Profile



1. Rationale
2. The Challenge
3. Pipeline Process
4. Selecting Clients
5. Scoping TO
6. Scoping TR
7. Encouraging Commitment
8. Adding Real Value

# 1. Rationale



Technology Profiles: our product; our client's face

- Our shop-window
- Two types of product – offers & requests
- Reflect the way we and our clients are seen
- Good/quality profiles generate a positive response
- Poor profiles generate a negative response

# 1. Rationale



## Type of Profiles

- Technology Offer
- Technology request
- R&D Request



Technology Profile

- Business Offer
- Business Request



Commercial Profile

# 1. Rationale



SMK: Sales Material Kit

- Technology Profiles
- Quick Pitch Deck
- Video Clip
- Catalogue
- Photo

## 2. The Challenge



What is a quality profile?

- Grabs interest quickly
- Uses clear, concise language
- Scopes & sells the business opportunity
- Encourages client ownership
- Stimulates an appropriate response
- Does the job - fit for purpose



## 2. The Challenge



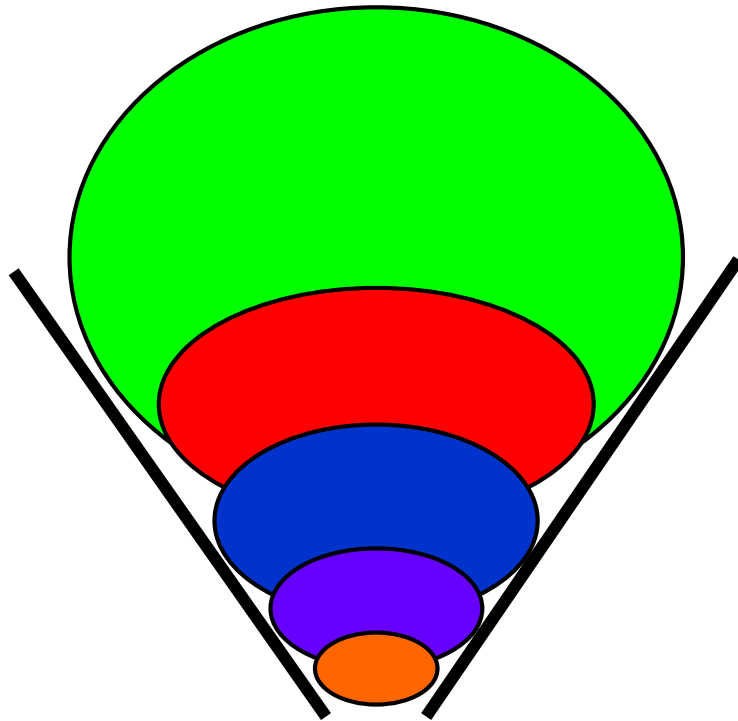
### Generation quality profile – Five Key Steps

- Selecting responsive clients
- Scoping the opportunity – offer & request
- Encouraging commitment
- Adding real value
- Maximising 'product' impact

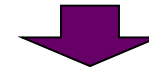
# 3. Pipeline Process



Helping to forge profitable partnerships



Technology active Companies



Interested prospects



Responsive clients



'Matched' Clients



'Partnered' Clients

# 4. Selecting Clients



Responsive clients help maximise our effectiveness

- Screen your prospect
- Assess the contact person
  - Would you trust them?
  - Would you work with them?
  - Are they professional?
- Importance of partnering
- Decision-making

# 5. Scoping TO



We are generalists not technology experts

Where does the technology fit? Who would want it?

- Protection
- State of Development
- Market need & Competition
- Innovation & benefits
- Risks & rewards
- Partners

Remember, someone somewhere needs to make MONEY!

# 6. Scoping TR



Most good questions are common sense – ask lots of them!

What is the business need? Who might have a solution?

- Business Need
- Timeframe
- Technical Specification
- Solution providers
- Process & change management

Remember, don't start unless they can assess, pay for & manage the solution!

# 7. Encouraging Commitment



Involving clients & managing their expectations is crucial

Don't make it easy. Don't do all the work. We need long-term buy-in.

## 1 - ENSURE THE CLIENT WRITES THE FIRST DRAFT

It is THEIR technology. Provide advice, templates & models.  
But insist that they write it.

## 2 - MANAGE THE CLIENT'S EXPECTATIONS

Use a Factfile - make clear what you will do, won't do and what you expect of them. Clients sign at senior manager/director level.

Remember, our products are THEIR profiles. We assist. But they must own them!



# 8. Adding Real Value



How to sell a business opportunity in an engaging way

The three Cs!

Profiles should be attractive, interesting, & encourage an appropriate response.

## 1 – CLEAR

Tell a story. Use pictures & simple language. Avoid jargon.  
Don't drown in technology.

## 2 – CONCISE

Short descriptions. Streamline. Remove the unnecessary.  
Focus on the core offer.

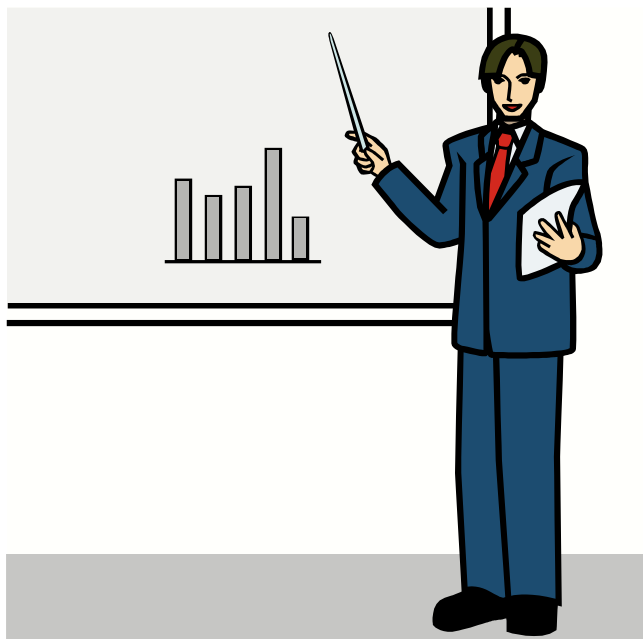
## 3 – COMPREHENSIVE

Serious & attractive. Provide a context. Answer the questions  
potential partners would ask.

Remember, even non-technical people should understand them!



## IV. Profile Writing



1. Technology Offer
2. Technology Request
3. Maximizing Product Impact
4. Assignment

# 1. Technology Offer (1)



## TITLE

- Grab attention. Encapsulate the opportunity
- Use interesting 'key' words.
- Avoid abbreviations & words like 'new' ...
- Make it easy to understand.
- Draw readers on to the abstract

## ABSTRACT

Make sure it is an abstract. Use a standard model e.g.

- A Korean engineering company ...
- has developed (is seeking) ... a product/process
- for applications in ... sectors
- The technology is (should be) ...
- The company is seeking ... partners interested in ...

# 1. Technology Offer (2)



## DESCRIPTION

Give a context. Don't repeat the abstract. Keep technical details to a minimum

## FOR YOUR OFFER

- Highlight weaknesses of existing solutions
- Describe market need
- Outline benefits of new technology
- Draw readers on to the abstract

# 1. Technology Offer (3)



## INNOVATIONS & ADVANTAGES (TO)

You must differentiate your offer from what is out there already

- Describe what is new/different to existing solutions
- How does it compare to the state-of-the-art
- What are the MAIN benefits – e.g. cost, speed, efficiency

# 1. Technology Offer (4)



Sample

## Description:

In the summer production of thermal (or electric) energy starts at 4.30 a.m. and finishes at 9 p.m. The collector's angle turns  $270^\circ$  horizontally and  $78^\circ$  vertically what allows to track the sun light throughout the day. It increases the efficiency of one square meter by 2.5 – 5 times in comparison with traditional collectors. The sun-tracking systems is ideal for making use of dispersed sun radiation by scanning clouded sky for spots of greatest transparency. After the absorber has reached the temperature of  $94^\circ\text{C}$  there is a reverse movement off the sun till the starting position vertically to the east. On cooling the absorber to the temperature of  $89^\circ\text{C}$ , the collector turns back towards the sun.

## Innovations and advantages of the offer

High power function.  
Easy to move function.  
New "holiday function".



## Technology Concept

Sun-tracking system scans clouded sky for spots of greatest transparency, increasing the efficiency of one square meter by 2.5~5 times in traditional collectors.

## Graphic Description

# 1. Technology Offer (5)



## STATE OF DEVELOPMENT & IPR (TO)

These are important sections. They help to define the RISK!

Be precise

Provide useful details

## COLLABORATION

Another key section. Make it easy for your network colleagues

Define the partner – e.g. established laboratory instrument companies

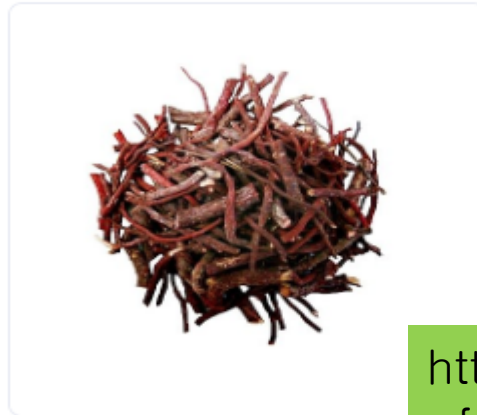
Clarify the business opportunity – e.g. reducing manufacturing costs

# 1. Technology Offer (6)



## A Korean company offers technology to improve the concentration of shikonin (anti-inflammatory functional ingredient) derived from the lithospermum root

30 2023. 6. 15.



### Summary

The Korean SME has developed a bioengineering method to enhance the shikonin content in Lithospermum roots, using techniques such as alkali hydrolysis and supercritical extraction. This technology can contribute to the pharmaceutical and biotech industries, especially in applications related to skin diseases.

The company are seeking for partners who can assist in product sales or securing authorization and can collaborate on deals including business contracts, exports, and local product sales.

<https://www.delbiznet.com/selling-offer/view.php?idx=238>

### Advantages and Innovations

- **Advanced extraction techniques:** Knowledge and expertise in employing advanced extraction methods such as alkali hydrolysis, biotransformation, and supercritical extraction to enhance the content and purity of shikonin in the natural material.
- **Biotransformation technologies:** Proficiency in utilizing biotransformation processes to selectively produce shikonin and remove undesirable compounds, such as acetylshikonin, to ensure high quality and efficacy of the final product.
- **Supercritical extraction:** Understanding and expertise in utilizing supercritical extraction methods to efficiently extract and concentrate shikonin while maintaining its bioactivity and stability.
- **Formulation development:** Skills in formulating functional extracts containing high levels of shikonin into various product forms, such as lotions or creams, to ensure optimal delivery and effectiveness for skin disease treatments.
- **Safety and efficacy evaluation:** Knowledge in conducting rigorous safety and efficacy evaluations, including preclinical and clinical trials, to demonstrate the safety, anti-inflammatory capacity, and reduced skin irritation properties of the developed extract.
- **Scaling up production:** Expertise in scaling up the production process to meet commercial demand while maintaining consistent quality and content of shikonin in the natural material.
- **Regulatory compliance:** Understanding and adherence to regulatory requirements and standards in the pharmaceutical and cosmetic industries for the development and commercialization of natural material-based products.



## 2. Technology Request (1)



### FOR YOUR REQUEST

- Outline the problem that needs to be solved!
- Explain what doesn't work!

## 2. Technology Request (2)



### TECHNICAL SPECIFICATION (TR)

You must make clear what you do want and don't want

For example - patented, market-ready, low cost ...

Critical Technology Element (CTE)	
Physical properties	Volume, Weight
Technical Performance	Speed, Power, Efficiency, Convenience, Durability, Confidence level, Interface & interconnect, Sphere of application
Manufacturability	Assemblability, Installation Method, Production Process, Waste
Cost Reduction	Manufacturing Cost, Initial Cost, Operational Costs

# 2. Technology Request (3)



Sample

## Description:

A company wants to start production of flat-plate solar collectors. Therefore the company is looking for ultrasonic technology to weld copper or aluminium plates to copper tubes. In the production process they want to use modern materials. As flat-plate for collectors they expect to use copper plate - thickness 0,2 mm or aluminium plate - thickness 0,5 mm. The upside of the plate is covered with very sensitive coating that should not be damaged during welding.

## Technical Specifications / Specific technical requirements of the request

The technology should be tested and already on market.  
The maximal size of welding surface 1m x 2,5m.  
The material joining: aluminium-copper, copper-copper  
The thickness of plates: min. 0,2mm up to 0,5mm  
The technology developer should be able to carry out training of personnel.

Technical Performance

## Other Profile Details

Organisation: Latvian Technological Center  
Network: LV150340- Latvian Technological  
Partner: Center  
Country: Latvia  
Entry Date: Fri, July 10, 2009  
Validation Date: Fri, July 10, 2009  
Deadline: Sun, June 27, 2010

## List of Keywords

### Technology

- ✧ Jointing (soldering, welding, sticking)
- ✧ Solar/Thermal energy

### Market

# 2. Technology Request (4)



## Automate the container loading process

71 2023. 3. 16.



### Summary

A large Dutch company specialized in future-proof logistic process automation and partner of an international open innovation contest is looking for solutions and technologies to further automate the container loading process. SMEs and academia are sought to participate in an open innovation contest. A research and development agreement is envisioned.

<https://www.delbiznet.com/buying-request/view.php?idx=199>

### Description

A Dutch company is a market-leading, global partner for future-proof logistic process automation in the warehousing, airports, and parcel sectors. Its extensive portfolio of integrated solutions – innovative systems, intelligent software, and life-cycle services – results in the realization of fast, reliable, and efficient automation technology.

The company is a leading supplier of process automation solutions that address the challenges in the parcel market. More than 52 million parcels are sorted by its systems every day, which have been installed for the world's leading parcel handling companies.

Today the company faces many challenges, which they hope to solve with partners. For instance:

The growth of e-commerce has resulted in a strong increase of parcel volumes. A large part of those packages that are shipped worldwide are transported in containers. Those containers are loaded manually, while one of the biggest challenges of parcel companies today is labor availability.

The company believes that robotic solutions will play an important role to further automate the container loading process.

This challenge addresses the 3D bin packing problem of parcel loading, which can be seen as a 3D Tetris game that the robot is playing to fill a container.

The challenge consists of 3 scenarios:

1. Adhoc packing [no lookahead, no sequencing]
2. Hybrid packing with lookahead [lookahead, no sequencing]
3. Hybrid packing with lookahead and sequencing [lookahead, sequencing]

Together with a German research institute the company submitted an open competition to everyone working or willing to work on the respective tasks of the individual competition tracks. Researchers from industry and academia working on these tasks are especially encouraged to participate in the challenge. We also welcome commercial solutions to the tasks at hand in the competition.

The winner contestant will be selected to jointly explore product development of a parcel loading solution.

# 3. Maximizing Product Impact



Champion the business needs of your client

Think outside the box. Who could benefit from this business opportunity?

- Factfile
- Channels to market
- Professional format
- Targeted searches

## 4. Assignment



***WRITE A TECHNOLOGY OFFER FOR AN  
SOLUTION PROVIDER***

***WRITE A TECHNOLOGY REQUEST FOR AN  
INNOVATION SEEKER***

# THANK YOU



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