Sustaining Higher Education Funding
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Commercialisation of University Research

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- Why look at spinning out a company
- What would you do if you discovered a new technology
- The highs and lows of developing new technology
- Current Markets

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Why look at spinning out a company?

- Unfettered capital income
- Kudos
- Demonstration of research relevance
- Access to addition funding sources
- Interaction and input from industrial partners

If its not worth doing – why do it?

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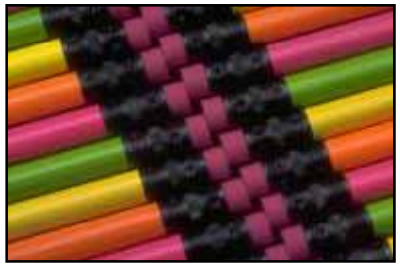
Everything needs solvents

Agriculture

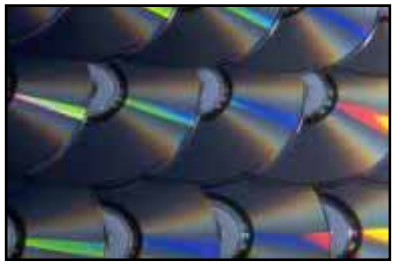
Textiles

Communications

Aerospace



Dyes



Consumer products

Polymers

Food

Transportation

Decorating

Construction

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What would you do if you discovered the ideal solvent ?

- Cheap
- Environmentally compatible
- Non-toxic
- Sustainable
- Non-flammable
- Non-reactive
- Useful solvent properties

300 molecular solvents are currently used → Lets make an ionic solvent

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Maunufacture

- Salt (B-vitamin) + Complexing agent

First Steps

How do we protect ourselves?

Do we patent straight away?
Note: Initial patent is cheap but it becomes more expensive to maintain after 1 year.

How do we fund it?

Industrial Partner (Money + financial & technical expertise)

Business Angel (Money + financial expertise)

Venture Capital

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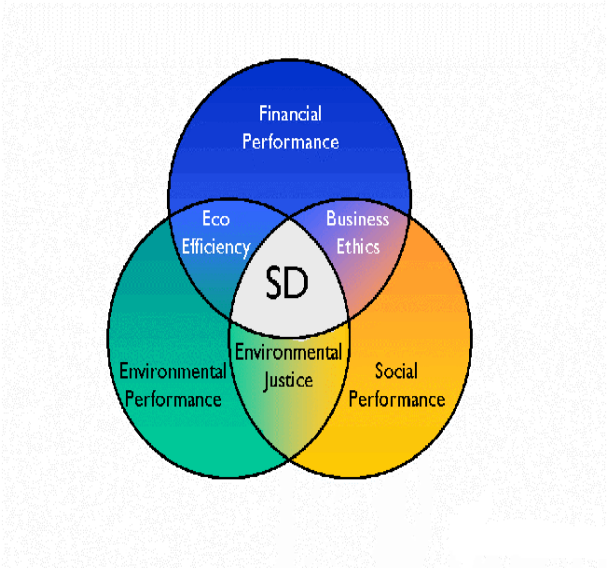
What is Scionix?



Scionix has patented over a MILLION ionic liquids based around quaternary ammonium salts

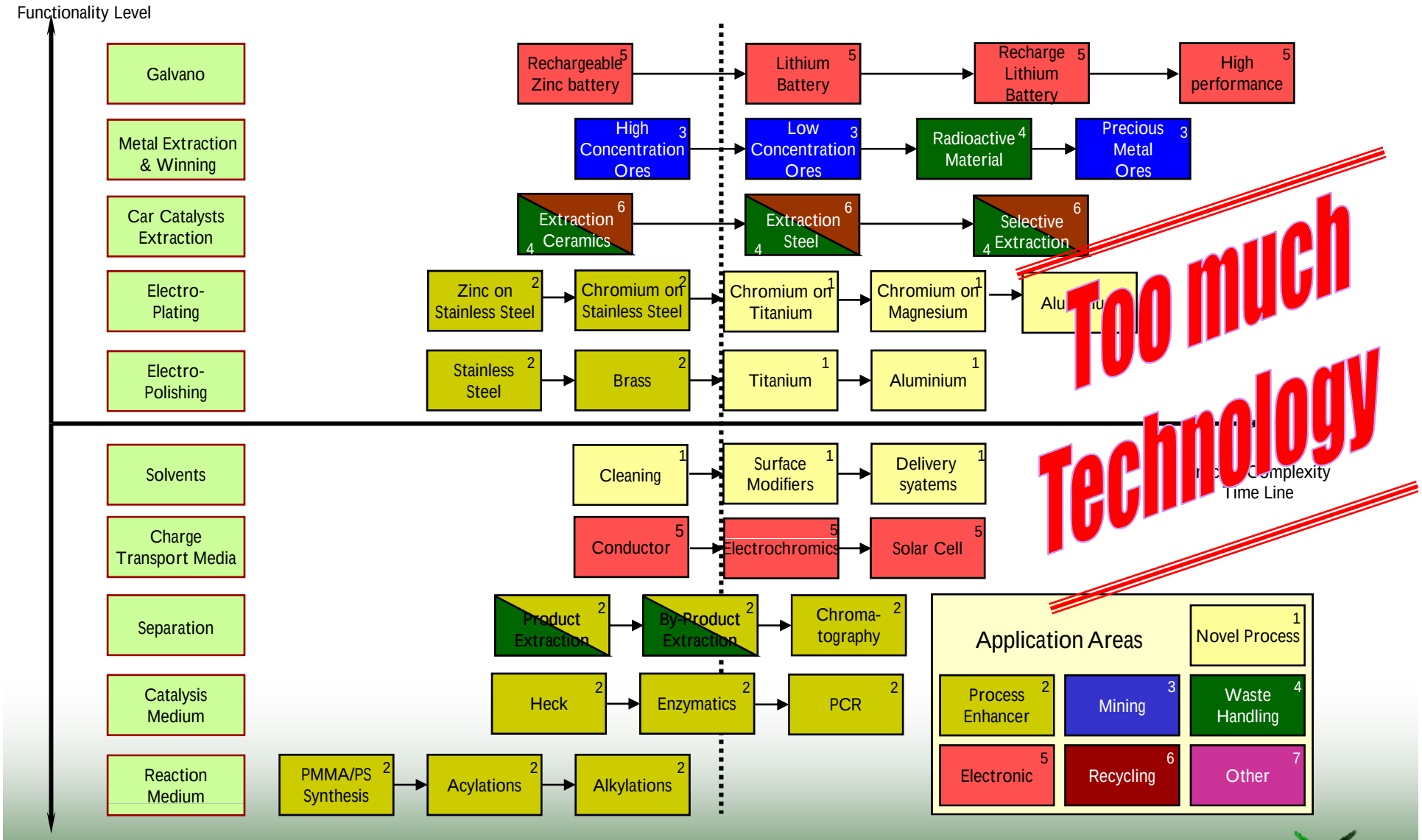
University of Leicester + GENACYS + = Scionix

UNIVERSITY of LEICESTER
- Electrochemistry
- Synthesis
- Inorganic Chem.
- Analytical Chem.

GENACYS Ltd
- Intellectual Property
- Licensing
- Start-up Expertise
- Finance

WHYTE GROUP Ltd
- Bulk Chemistry
- Logistics
- Distribution
- Accounting

Ionic Liquids - Applications



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Pitfalls

Scionix was slow to develop

- Beware the timewasters
- If it looks tricky – it generally is – leave it till later
- Never trust anyone that says they are gong to buy the company
- Big companies take longer to reach decisions

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- 10 ILs have been produced in over 200 kg batches
- One IL made on the tonne scale

Make sure you can make your product

MSDSs have been issued
Synthesis and handling protocols written
Recycling of used ILs

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Essential Marketing

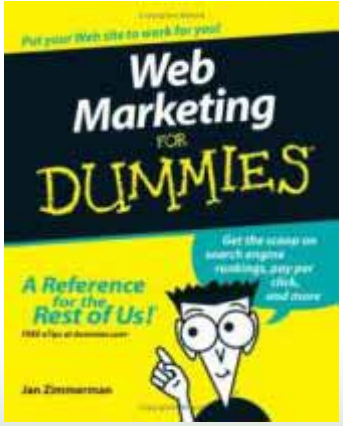
Work on your image early – First impressions count

Make sure you have:

- ❑ A logo
- ❑ Business cards
- ❑ A web site
- ❑ A corporate image
- ❑ Develop a stand for trade fairs
- ❑ Licensing strategy

- ❑ You can't have too much publicity

Don't advertise yourself as an academic!



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Applications

Lowest hanging fruit first

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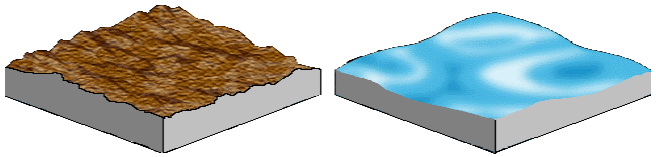
Electropolishing

- Large worldwide industry – based on acid



Before After

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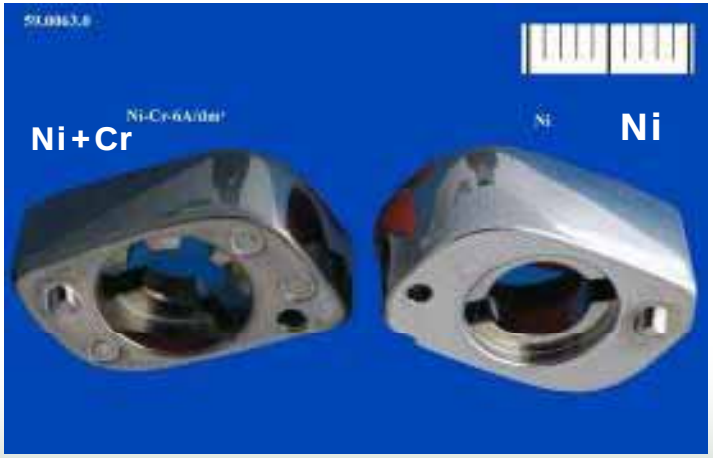
Metal Deposition



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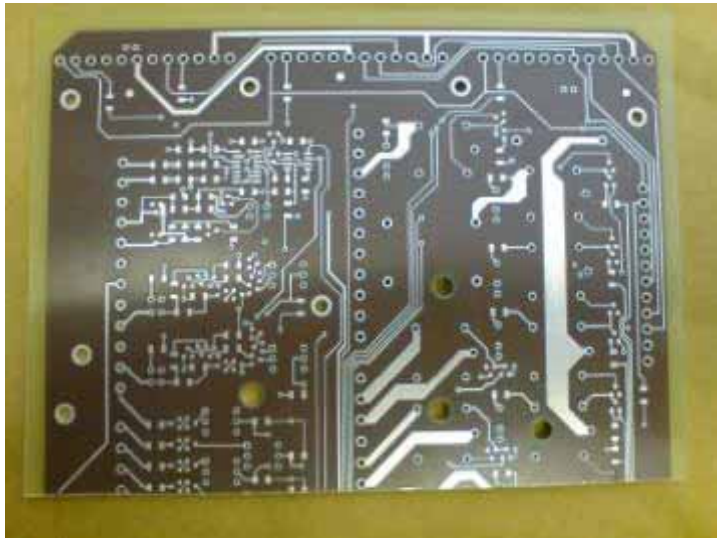
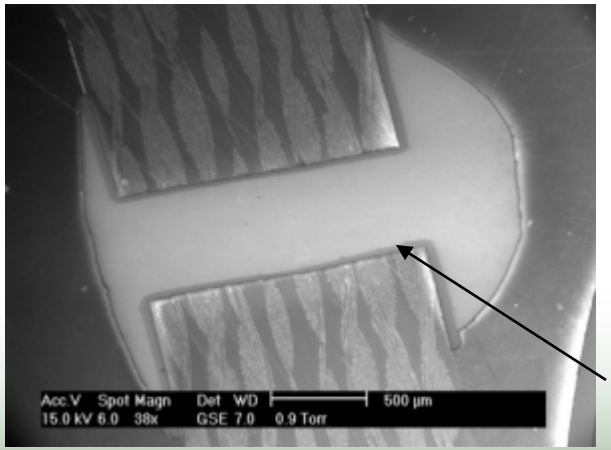
Electroless Silver



P.W. CIRCUITS LTD



Soldering Ag coated Cu interconnects

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Key Issues

- Cash flow to maintain research.
- When entering into such joint ventures both parties must have synergy i.e. the only reason to collaborate is NOT just money.
- Be conservative when estimating the time taken to bring products to market.
- Factor in a failure rate of 80%
- Focus on projects that have a very strong driver to utilise the technology.

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Mistakes

- Not enough funds initially
  Companies won't invest in potential - they want to buy solutions. We underestimated development time. Work with small companies – It is a lot easier!
- Resistance to new technology
  Legal drivers are important (Cr)
- Underestimated timescale
  Some companies take a long time to reach decisions on funding, even for relatively small amounts of money (~£25,000)
- Hard to predict which areas are most likely to be successful

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Highlights

13 M Euro network with 33 partners and 6 pilot plants

What Next?

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Conclusions

- Ionic Liquids have numerous industrial applications.
- Lowest spec are the easiest to commercialise.
- Choose products that have no other processing technology.
- Build failure into your financial plans

Never give up!

More information at

- *www.scionix.co.uk*

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