How to use non-patent literature for market reports – *Video Transcript*

Using NPL to assess the state of the market

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Welcome back to our course on how to use NPL for market reports. In this section, we're going to begin with our first type of report, 'The State of the Market' report.

In a 'State of the Market Report,' you will want to include sections to cover the following areas:

One. A concise definition of the target technology being evaluated.

Two. A list of the main actors and experts.

Three. Current investment levels and estimations of market size.

Four. A list of target geographies.

Let's start with the **definition** of the technology.

The business question here is: What is the core target technology that you wish to use or develop and how is it defined or referred to in different types of non-patent literature?

It is absolutely critical to get this right, as it will ensure that any research activities do not become too broad. It will also mean that the relevance of different studies and data sets can be assessed and it helps to identify which technologies and subsegments should be included in, or excluded from, the scope of the study.

For example, 'neural network' in research can, of course, become 'AI' in popular press. Meanwhile, AI is referred to as machine learning and pattern recognition when looking at IPC definitions – the international patent classifications used to identify the technologies described in patent documents. However, these are loose terms and more work needs to be done to understand, let's say, a technology area within this space.

It is then possible to use this research to refine your own (internal) definition of the technology: its scope, characteristics, features and sub-technology areas. For example, AI might be the headline company strategy as communicated at a strategic level, 0

When looking at either the scientific and technical literature, in partic ular you'll be seeking to understand, when looking at the definitions, are there overlaps in terms, or do the terms signify different technologies? For example in mobile tech, when we talk about the next generation of mobile technologies, do we mean: 5G, NOMA, 5G NR, 5G E, 5G LTE, and so on – which one is applicable to the technology you are discussing?

Then, this can be compared to how for example an analyst house such as Gartner defines a technology and its segments (or dependent technologies) – Analysts need to have a common definition in order to calculate the value of a market, so are a great place to start to compare what they consider 'in scope' in their definition and 'out of scope.' Does it match your definition, or is the technology you describe a broader or narrower version of this?

Next: this should be mapped to the terms that are being used by trade press, bloggers? How do the definitions used by recognised experts correlate to those used in scientific or technical literature or those being used by analysts? This could say something about the technical depth of knowledge of the expert being cited.

Similarly in news articles, the way in which journalists are referring to the technology can reveal the level of maturity for a specific technology – how consumer ready might it be? What buzz terms are they using? How well is the technology understood and explained outside of trade press?

Lastly, how do investors refer to the technology? This can reveal whether they are interested in the broad technology area, or specific sub-segments.

As you carry out this research, make a note of any companies or inventors that are mentioned in order to help with the next section, creating a list of actors and experts.

Ok, **actors and experts** then… In every industry area, there are always some heavyweight personalities – these might be inventors, academics, technology evangelists or enthusiasts. What affiliations do they have?

As this list builds out the patterns will reveal which companies or universities have greater or lesser interests in our specific target technology.

It is worth noting who in this ecosystem could (one) be partners or (two) should be listed as a competitor.

But how can we make our first list of 'known competitors?' How can we find some that might have been unknown beforehand and move them onto the known list?

As we make our lists using the various types of non-patent literature – science, technical, market reports, news and so on – we should also research some additional information where we can.

Let's take science and technical literature. As we list out the names and organizations that ar e conducting research in the target technology area, we should stop to classify these researchers into specific types, so are they universities, research institutions, large companies, SMEs, start-ups or lone inventors? Based on this, would they be suitable partners or would they be regarded as competition?

Our next source of information could well be the market reports from analyst houses. When reviewing the reports that they have available, they will frequently publish the list of vendors that have been considered for the report within the synopsis.

Considering now expert opinion – in this category it is worthwhile to research the governmental, NGO, consumer groups, or other regulatory or standards authorities that would be relevant to this technology area. For example, in the telecoms space, one of the major standards bodies would be ETSI.

Checking Google's News search is also a great way to find actors in a space, while reviewing VC investment will reveal key investor organizations. For example, here we can see an example of VC investments in the 'Artificial Intelligence' area, which can show us who is serious about putting cash behind a specific emerging technology.

As an aside, when reviewing the news, it's worth making a note of the sentiment of reports and news stories towards the actors – and technologies involved – is it positive or negative…? This could well flag up items that could become issues later.

Moving on now to **market readiness.** In this part of your research, you may want to explore methodologies for calculating market size – or even just obtain an expert idea of the size of the market for a potential technology. You may want to understand how long it might be before a new technology will start to disrupt existing technologies or determine other threats that could be obstacles for your project.

Let's look, though, at other clues we can glean from our NPL literature sources.

First of all, science and technical literature

The state of research, for example whether it is early phase or late stage, is often discernible from the paper itself, while the actors (whether it is primarily universities or corporations) will indicate the maturity of the technology. Patents, also, will show this detail – if you run a search for the technology, it is worth then calculating the share of ownership of universities versus corporations.

The number of scientific publications and its trend will also show the level of investment in the research and the likely future commitment to this area.

OK, market reports now…

Here, you will want to investigate: What is the size of the market for a specific year? But the key thing here is to evaluate the differences between different analysts for that year. Do they agree, are the market estimations close? The more they agree on the market value, the more mature the market is likely to be as earlier technologies are much harder to estimate. These analyst comparisons could help us to derive an 'average' overall view.

Next, let's take a look at expert opinion:

What do influencers think of the state of the market? Are they expressing optimism or pessimism towards the technology and its anticipated uses?

Alright, news.

News stories often give away data points relating to companies – so refer back to the list of companies and organizations you've made – and make a note of market share estimates or market size estimates. A key question here is: Who is giving this data and what is the incentive for sharing the data? How trustworthy is it, therefore?

Last, but not least, company and financial information, where there are two main questions to be answered in our research.

First. How much has been invested in this technology by VCs?

Second. How does this compare to other markets?

As you conduct this research, think about making a list of any items that come up that may be accelerators or blockers for a target technology - and whether the blocker is country or region specific – this will come in handy for our next block of research: **Geographies**.

For example, do you need a UK, regional (e.g. EMEA) or an international global assessment? ThBefore We Get Startedis is important as local areas have different technology requirements that change or influence the definition of a technology or its need in the market – in fact, these different technology requirements and definitions are the reason why the F-Term patent classification system exist s for the Japanese market – simply to take into account these local peculiarities.

That concludes this section on 'The State of the Market' report. In the next video, we'll take a look at writing up a competitive analysis report. Thanks for watching and see you next time.