



Assessing the Quality of Patents and large Patent Portfolios based on quantitative Approaches – Opportunities, Threats and the St.Gallen Patent Index™

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Quantitative vs. Qualitative Approaches

How can we structure the different approaches?

	Qualitative Approaches	Quantitative Approaches
Valuation	Assignment of a monetary value to a patent/patent portfolio by experts	Assignment of a monetary value to a patent/patent portfolio by a market mechanism (auction, financial market)
Rating	Assignment of qualitative indicators based on a expert opinions	Assignment of quantitative indicators based on objective data from market and patent databases (Patent Indices)

Source: Gassmann/Bader 2012

Challenges within Companies

When shall we use quantitative approaches to analyse patents and patent portfolios?

Three of several possible situations in your company that can be handled using quantitative approaches:



- 1) Your company is redefining its technology strategy and you need to (re)value the patent portfolio of your company and your competitors, presenting further functional KPIs to the CEO
- 2) Your marketing or investor relations managers like to show the company's innovativeness by its patent power in an objective way
- 3) Your head of R&D is approaching you to receive a first IPR-value-assessment as well as IPR-trends in a totally new technology field for your company
- 4) You are interested in licensing or selling a subportfolio and are looking for a first overview on potentially interested companies

Opportunities and Threats

What have to be considered when implementing quantitative approaches?



Opportunities

- Resource savings
- Time advantages
- Cost reduction
- “2nd view” on the patent situation
- Objective and transparent analysis

Threats

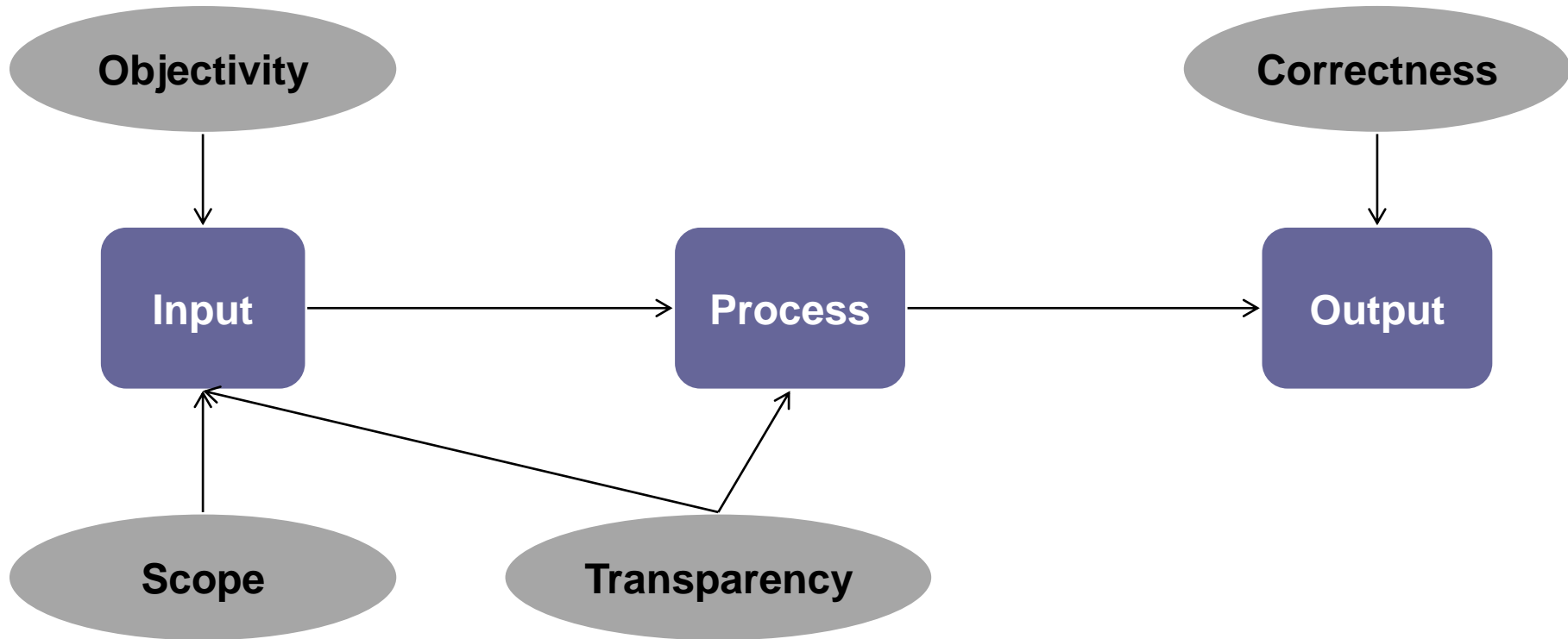


- Not a detailed claim analysis
- Statistical shortcomings to be considered
- Trade-Off:
Analysis of few important factors vs.
a huge bundle of factors leading to a
loss of transparency and complicated
algorithms

**Quantitative approaches are a strong tool
to analyse your patent portfolio**

Main Variables in Quantitative Analysis

What influences the quality of an analysis conducted via patent indices?



Main Indicators in Quantitative Analysis

What indicators should be incorporated in quantitative patent portfolio analysis?

Three main fields:



Measured by:

e.g. forward and backward citations;
age

e.g. GDP;
industry specific indicators

e.g. relative share of a companies` portfolio within the entire portfolio of a technology

St.Gallen Patent Index™ (SGPI™)

Created in cooperation between...

Institute of Technology Management



University of St.Gallen

BGW

Management Advisory Group
St. Gallen – Wien

**Eidgenössisches Institut für Geistiges Eigentum
Institut Fédéral de la Propriété Intellectuelle
Istituto Federale della Proprietà Intellettuale
Swiss Federal Institute of Intellectual Property**

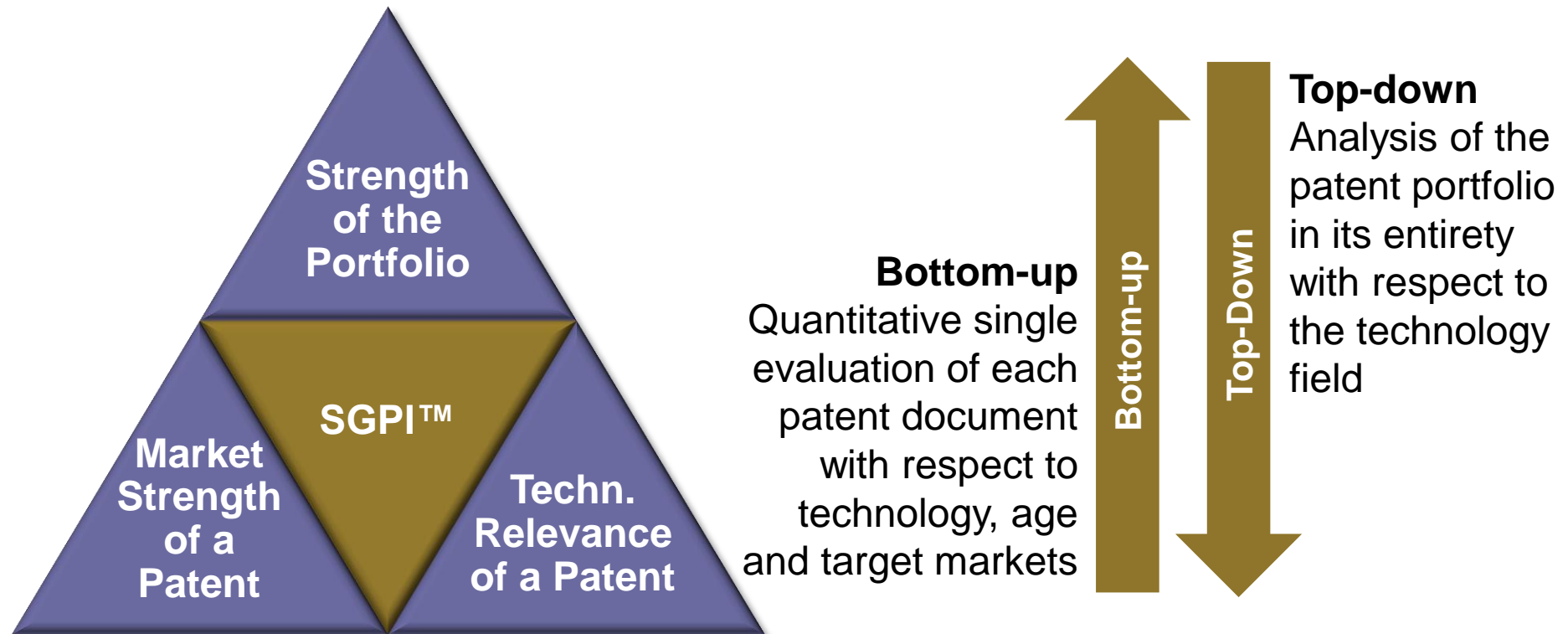
St.Gallen Patent Index™ (SGPI™)

What is the core idea of the SGPI™?



Core Idea

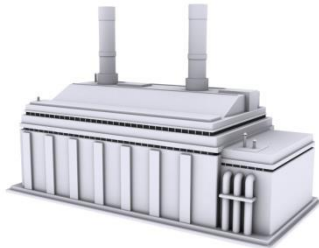
Calculation of a comprehensive index enabling the valuation of single patents and the patent portfolio by using a bottom-up and top-down approach within one single analysis



St.Gallen Patent Index™ (SGPI™)

In which fields can the SGPI™ be used?

Company Level



Strategy Development

Controlling

Communication

Financial Market Level



SGPI™ based Equity Funds

KPI in Financial Transactions

SGPI™ based Stock Index

Governmental Policy Level



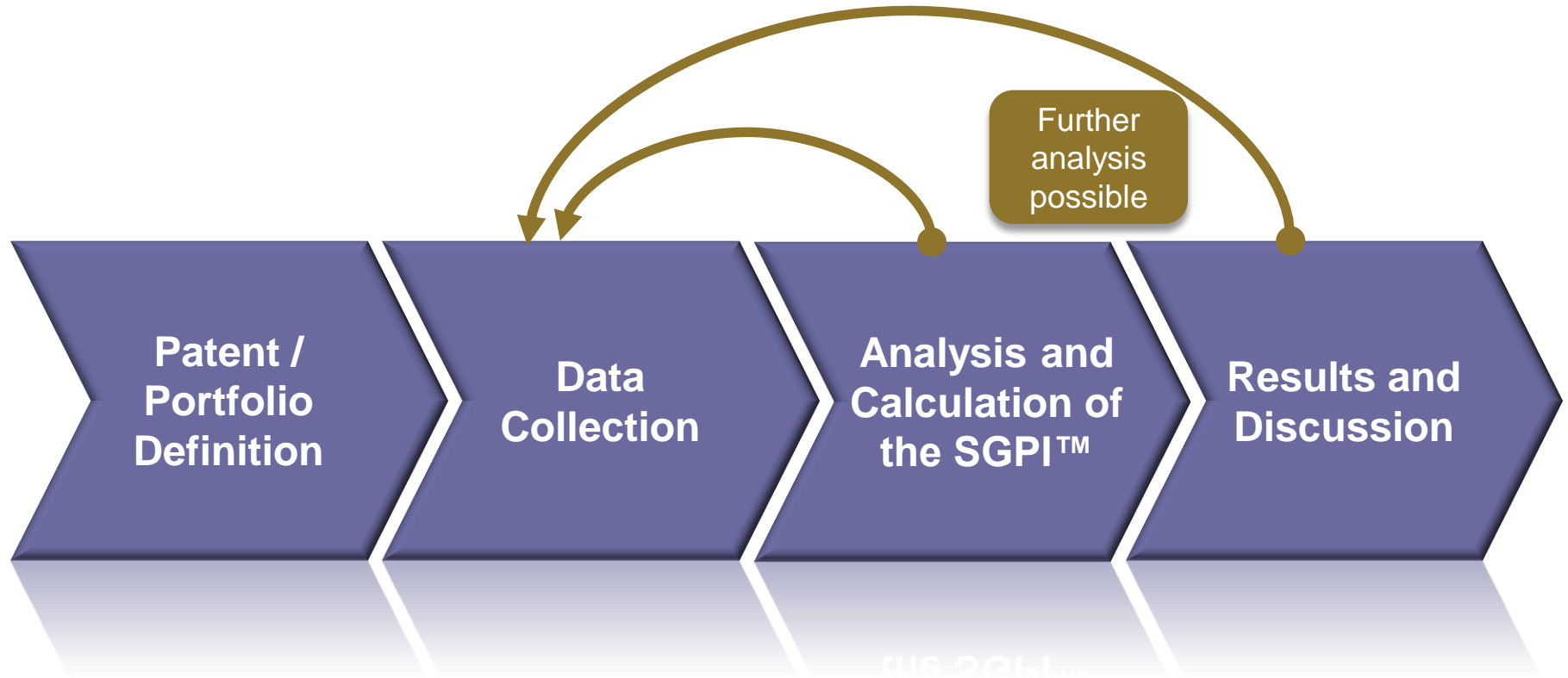
Policy Development

Communication Instrument

Benchmarking Cluster and Regions

St.Gallen Patent Index™ (SGPI™)

How does the SGPI™ work?



Challenges within Companies

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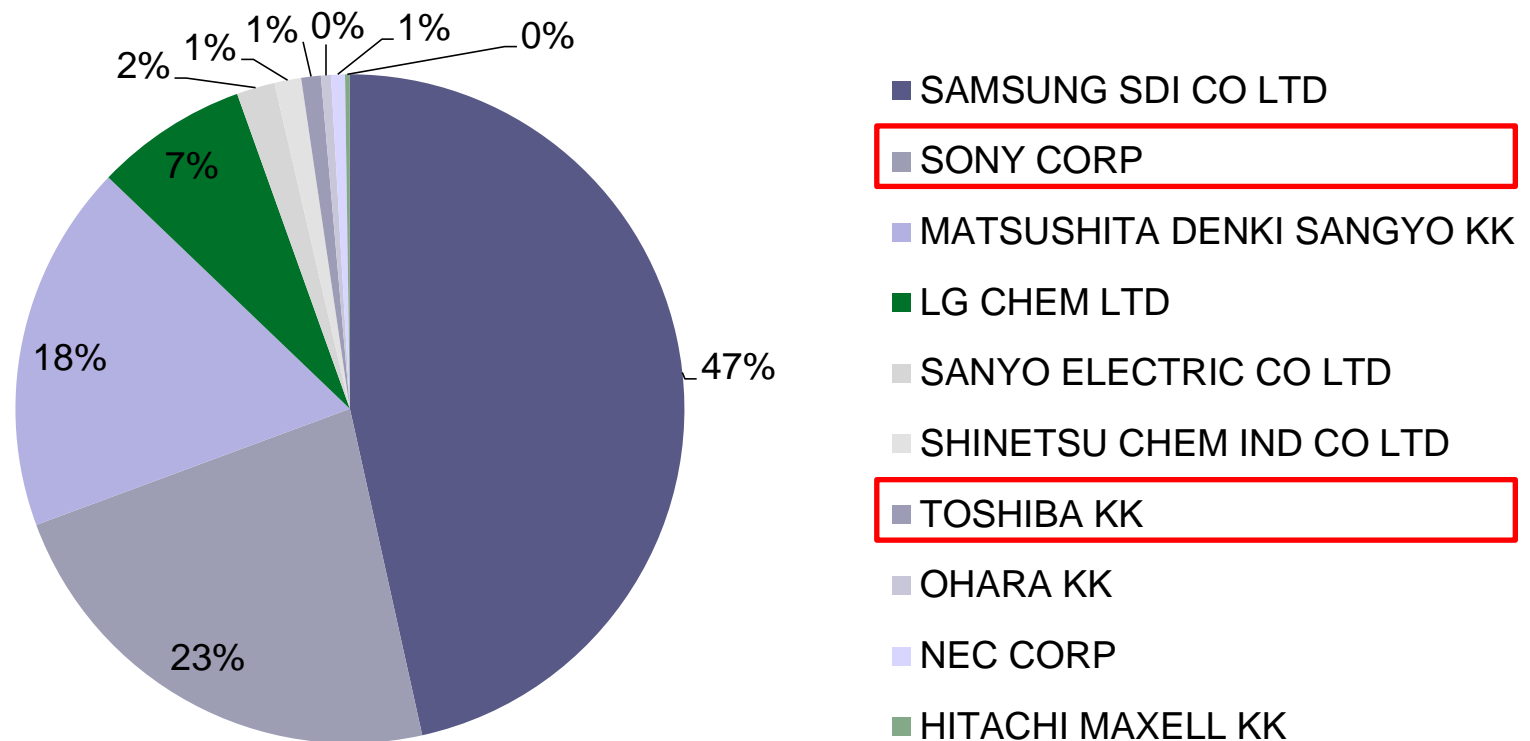


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Sample Analysis

Specific IPC-class within the technology field for Lithium-Ionen Batteries

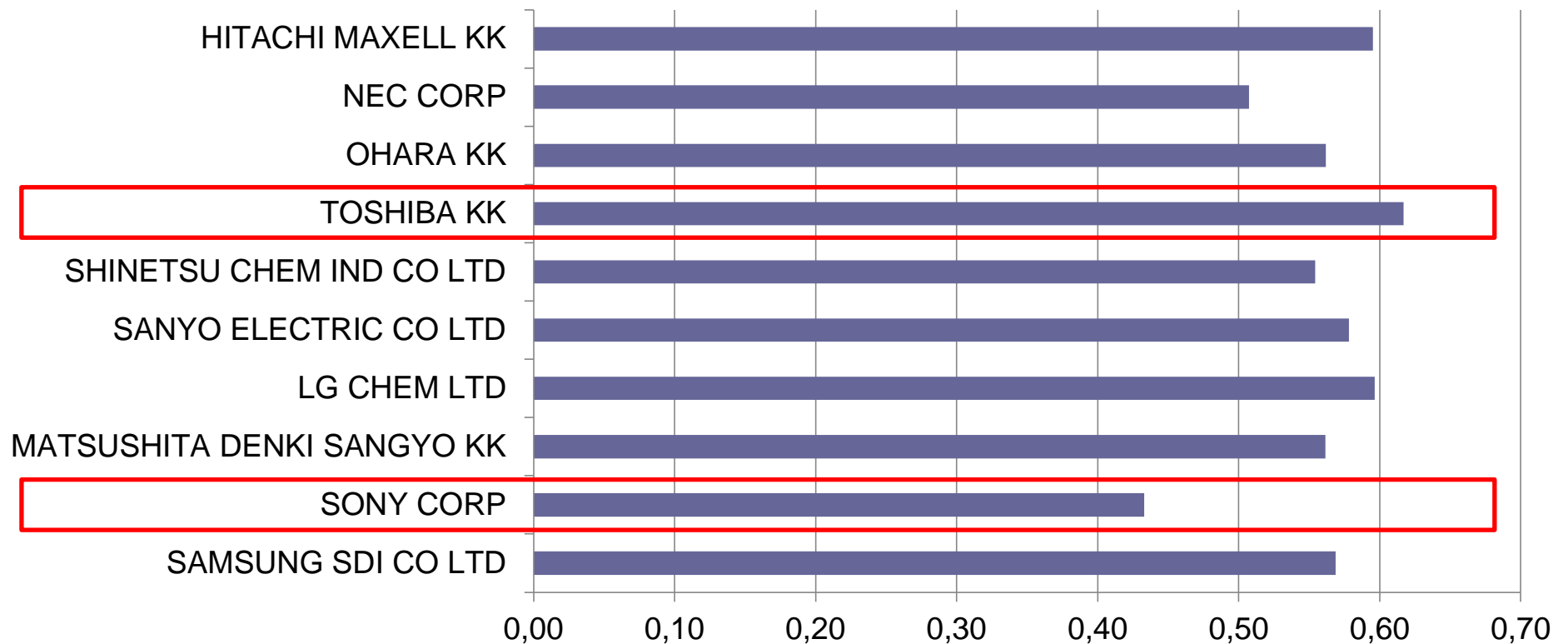
SGPI™ – Relative Shares of Total Value



Sample Analysis

Specific IPC-class within the technology field for Lithium-Ionen Batteries

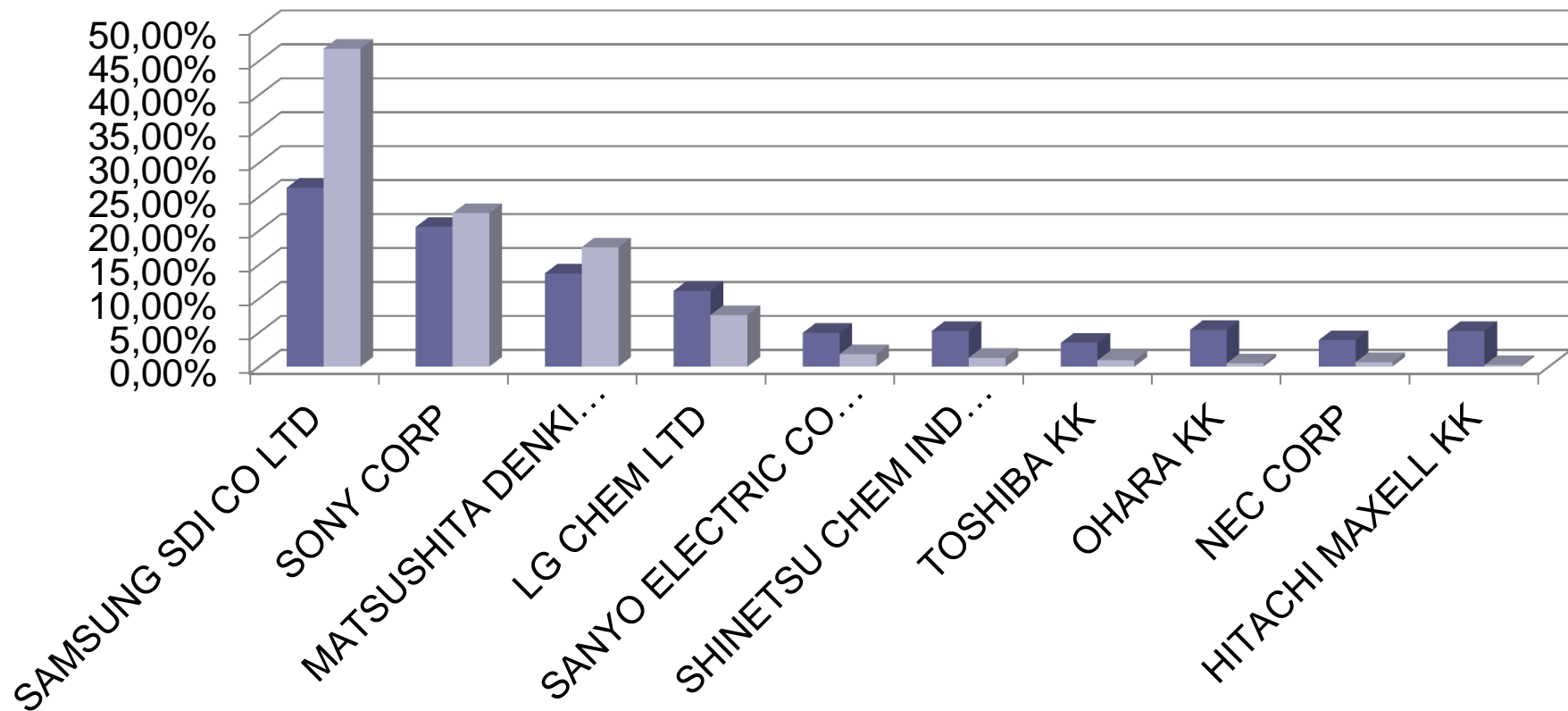
SGPI™ – Relative Shares of R-Factor (Technological Value)



Sample Analysis

Specific IPC-class within the technology field for lithium-ionen batteries

Comparison: SGPI™ vs. simple patent counting



Challenges within Companies

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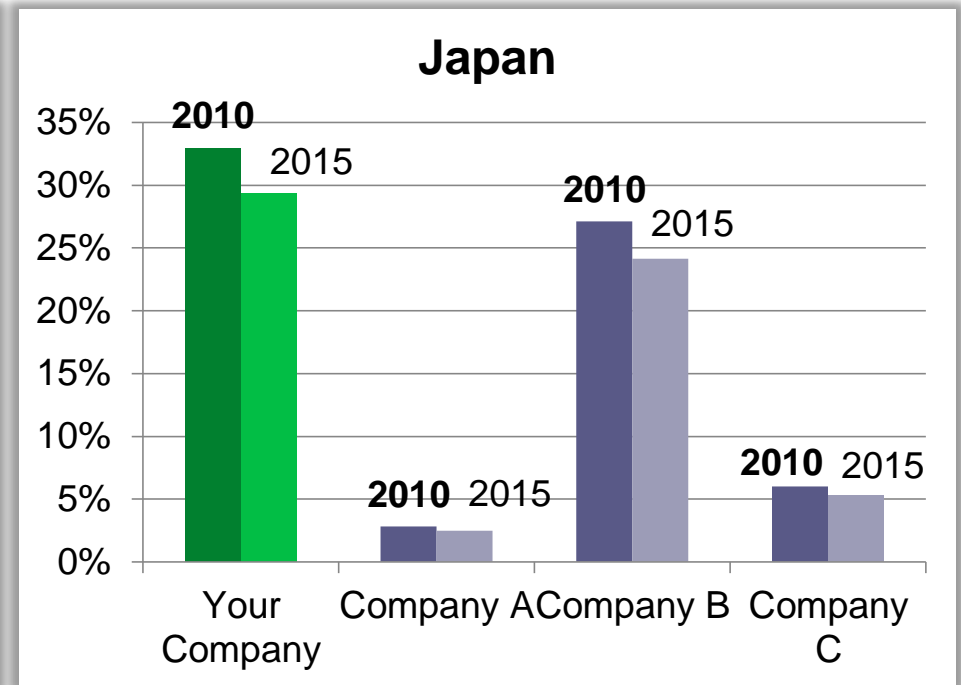
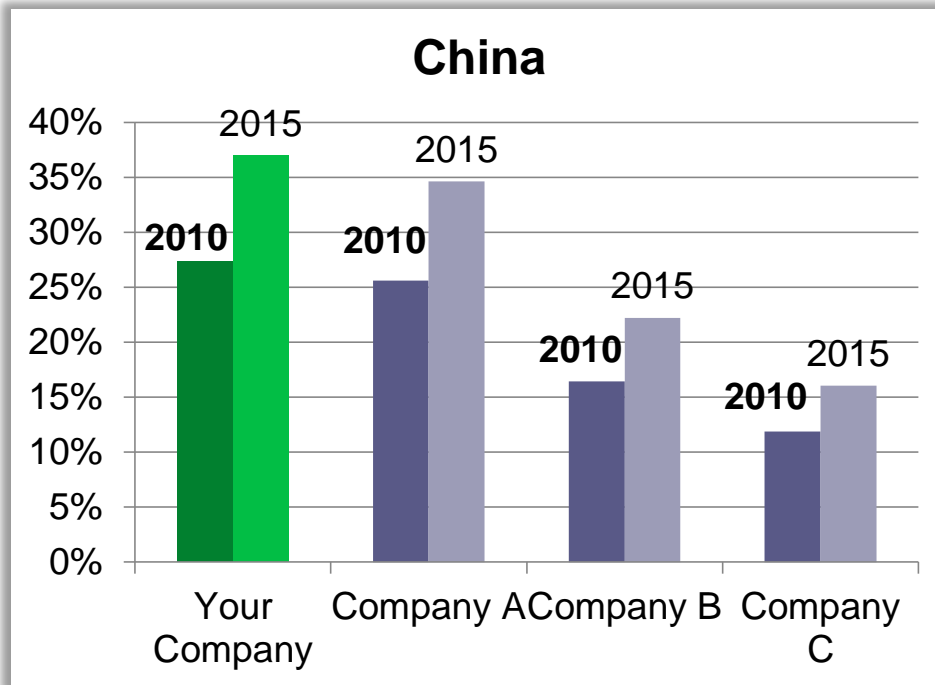


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Sample Analysis

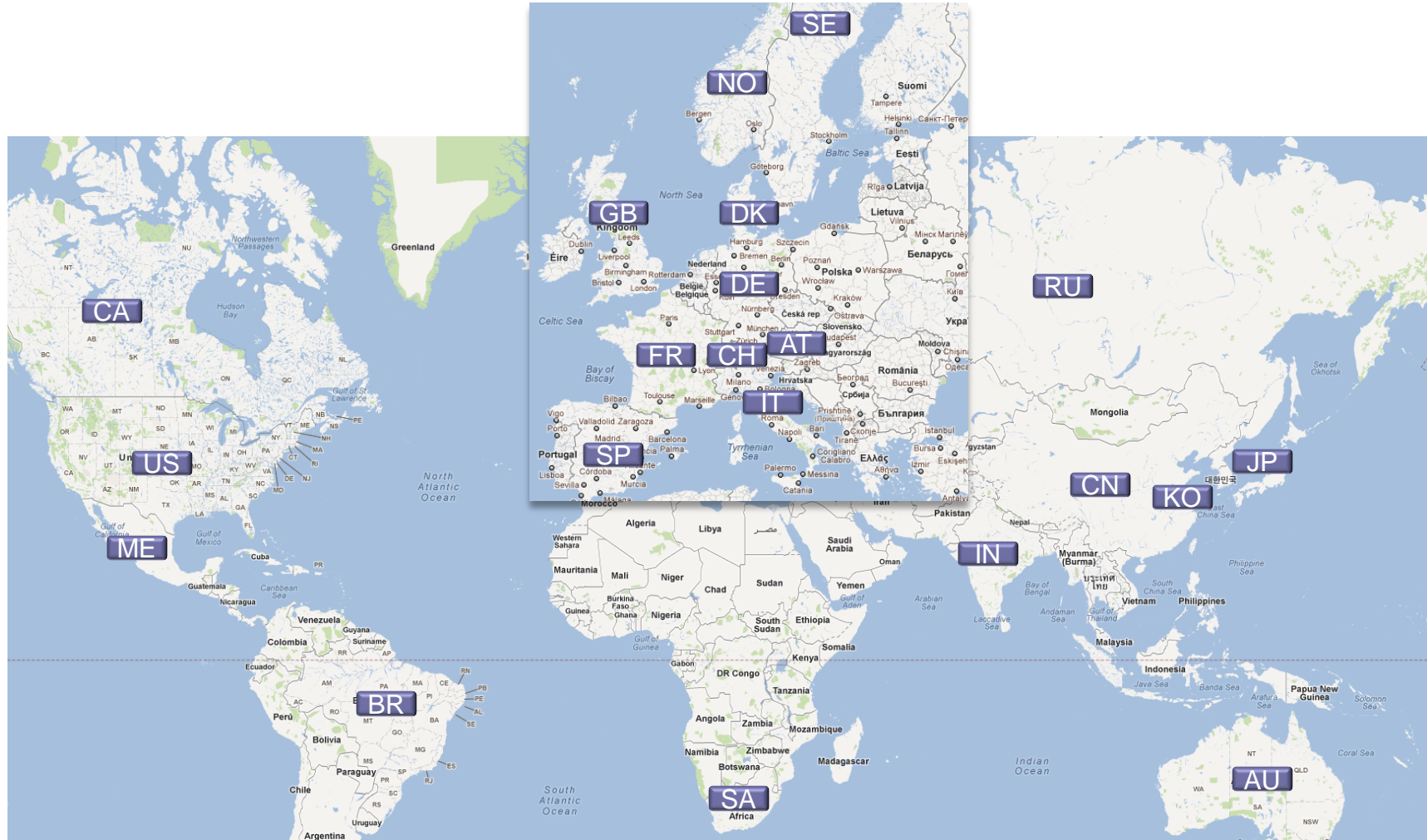
Specific IPC-class within the pharmaceutical markets for cancer

Comparison: Future Portfolio Development



Sample Analysis

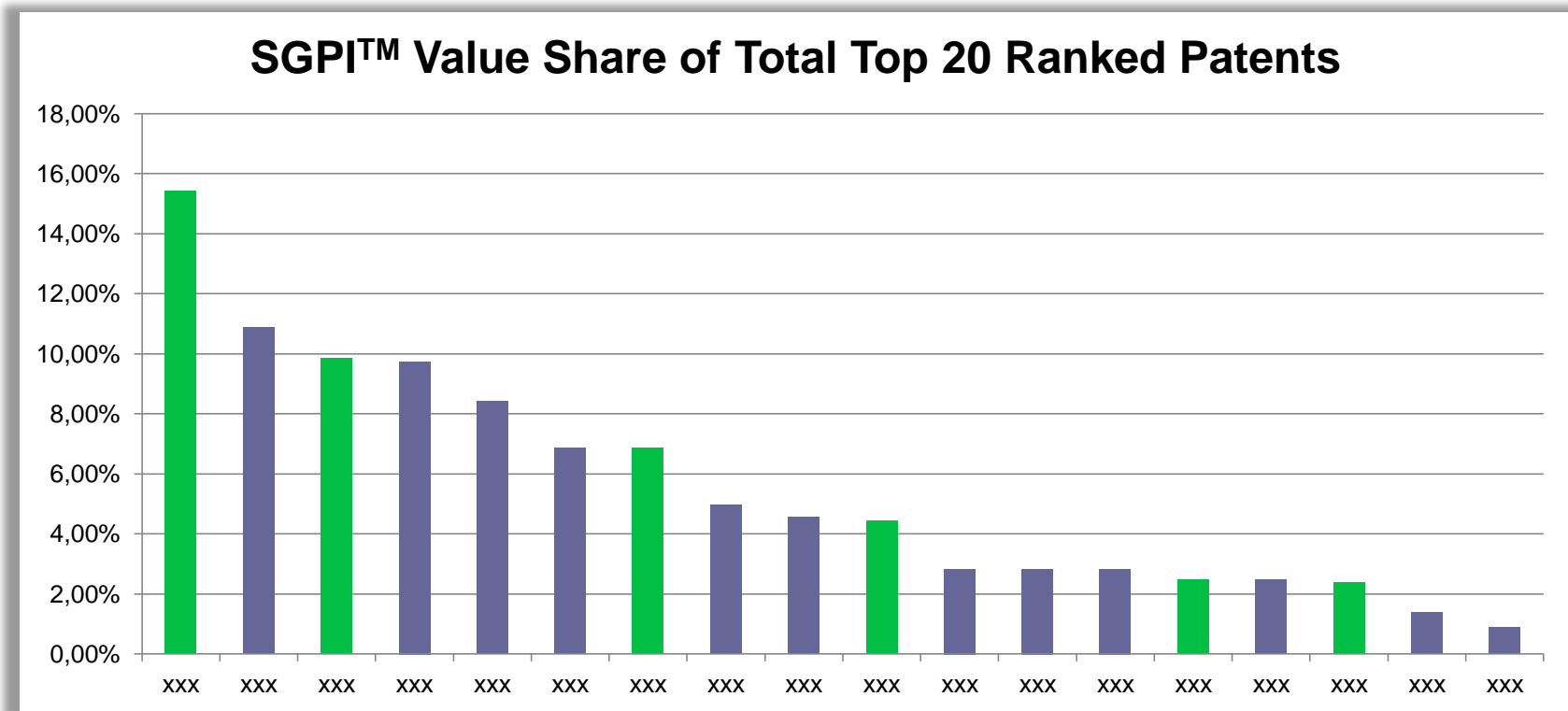
Specific IPC-class within the pharmaceutical markets for cancer



Sample Analysis

Specific IPC-class within the pharmaceutical markets for cancer

6 focus patents (green) belonging to one company ranked in comparison to the top 20 patents of the analyzed overall patent portfolio



Conclusion

The SGPI™ is a very clear and objective approach

- 1) Quantitative approaches are a very strong tool to analyse patents and patent portfolios.
- 2) These approaches enable a first or further view on the patent situation.
- 3) They help to save important resources in terms of time and money.
- 4) But one has to consider also statistical shortcomings.
- 5) The SGPI™ is a very transparent and objective approach.
- 6) The SGPI™ is able to analyse your patents and patent portfolio by using mainly three factors and can be used in several situations.



Thank you for your attention.



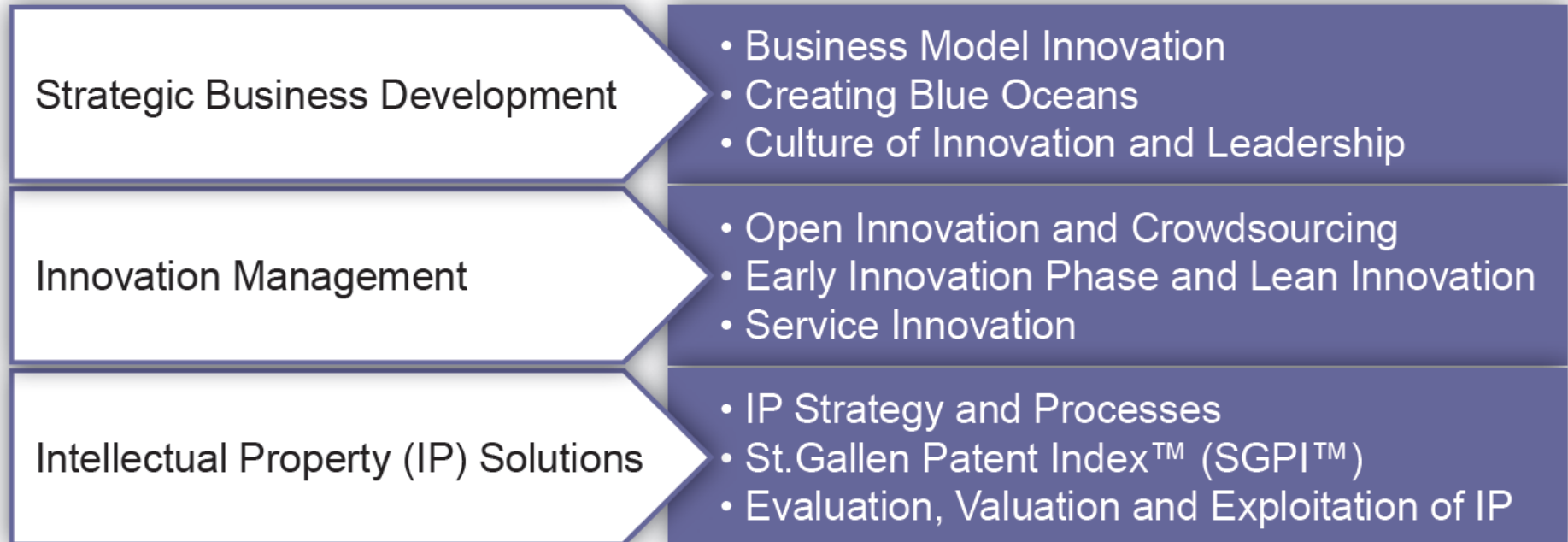
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BGW AG – Spectrum of Competences



Addendum