

7TH EUROPEAN INTELLECTUAL PROPERTY FORUM

REBUILDING YOUR IP STRATEGY THROUGH SYNTHETIC INVENTIONS TO BOLSTER YOUR COMPETITIVE EDGE

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Head of IP

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BACKGROUND

AT&S: world leading high-tech PCB & IC substrates company











1,746*

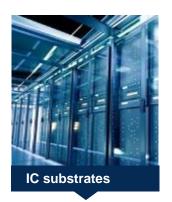
Austria 450*

India 1,462* China 6,891* China 3,983* Korea 347*

Malaysia Start of Production 2024

BACKGROUND

Market Segments & Product Applications



- High-performance computers
- Servers
- Client PCs
- Cloud & Edge computing
- 5G base stations
- Networking & gaming



- Smartphones
- Wearables
- Notebooks & tablets
- Consumer electronics (action cameras and drones)



- Dependable ADAS Sensors
- Connected vehicles and V2X
- Infotainment
- Satellites



- Smart building, grid, lighting, manufacturing, transportation & retail
- Telecom infrastructure
- Power management
- Robots



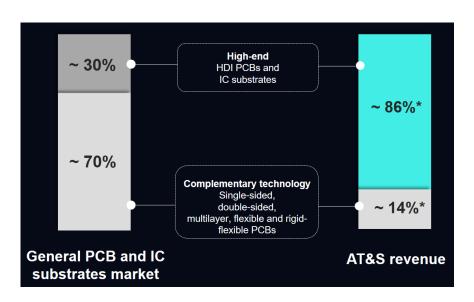
 Diagnostics and imaging systems

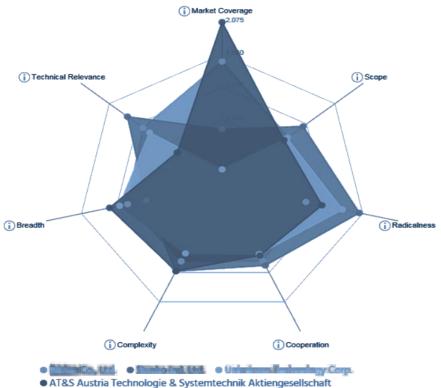
- Therapy application (pacemakers, hearing aids, drug delivery ...)
- Patient monitoring

BU Microelectronics

BU Electronics Solutions

Initial Situation



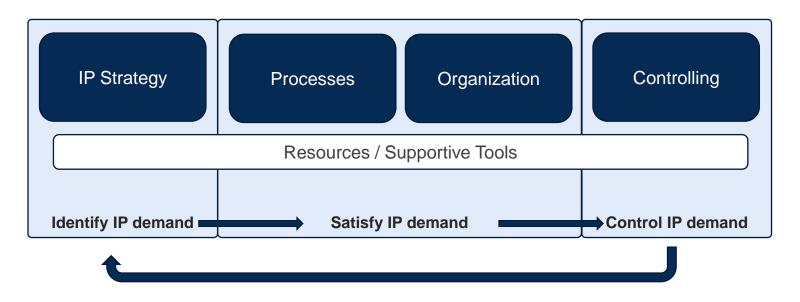






IP Management

Typical Building blocks

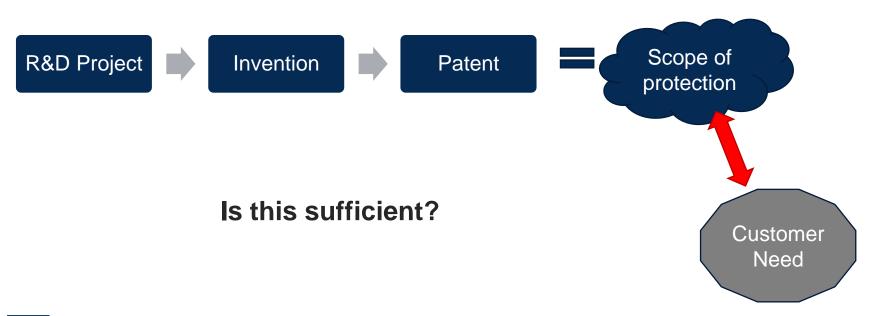


Is this sufficient?



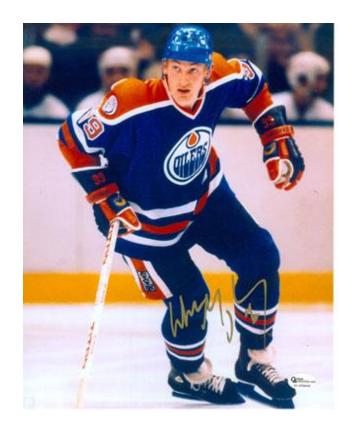
Patenting Strategy

Usual procedure of patent creation





Strategic patenting by systematic IP design



Wayne Gretzky:

"I skate to where the puck will be, not to where it has been."

Prerequisite:

Appropriate IP-Management



IP is happening outside of IP department





internal

Processes, organization, staff,... (relatively easy to measure with KPIs)





Holistic IP Management

Effectiveness (doing the right things)



external

external dependencies:

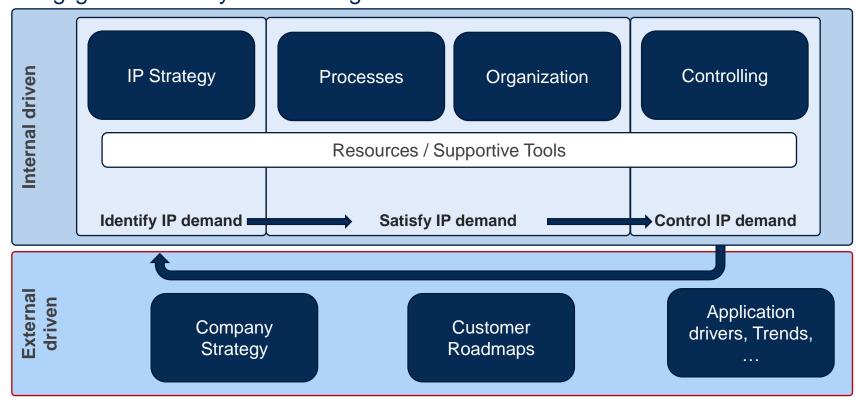
inside company (BD, Strategy, Sales, ...) outside company (customers, trends, ...)

-> KPIs should be quality-based



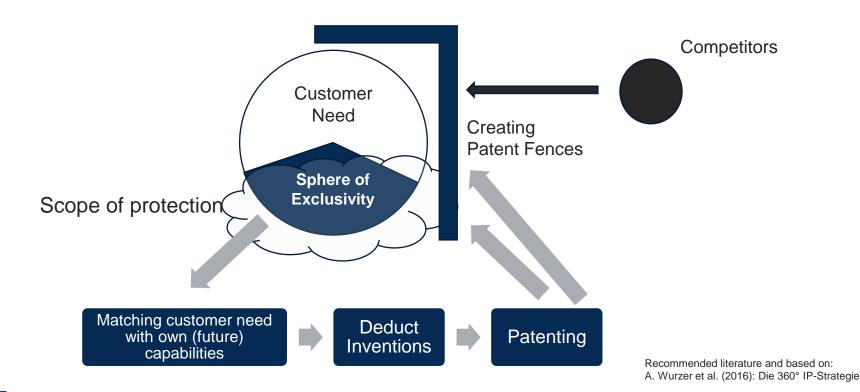
Holistic IP Management

Breeding ground for Synthetic IP generation





Strategic patenting by systematic IP design

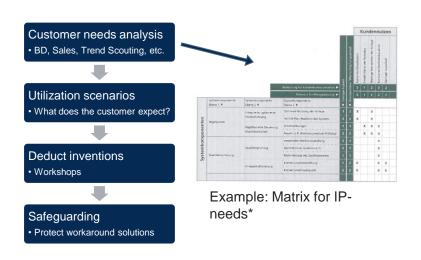




Instruments for synthetic IP generation

IP requisition analysis

Deviation of customer need in technical key features

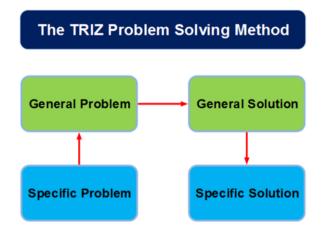


^{*} Source: A. Wurzer et al (2016): 360° IP-Strategy

Design for Patentability (based on TRIZ)

Structured innovative problem solving

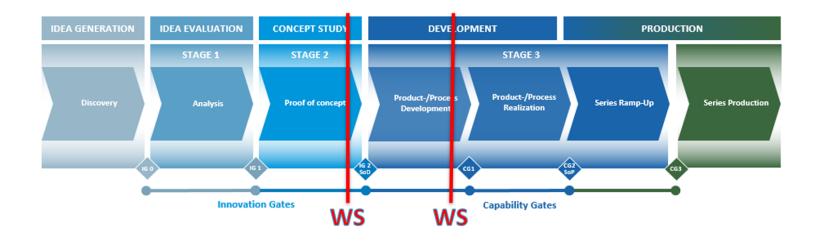
- Secure core patents with alternatives and incremental synthetic inventions
- Fences foreign key patents
- Strategic Patent circumventions





Example: Synthetic inventions in Stage Gate Process

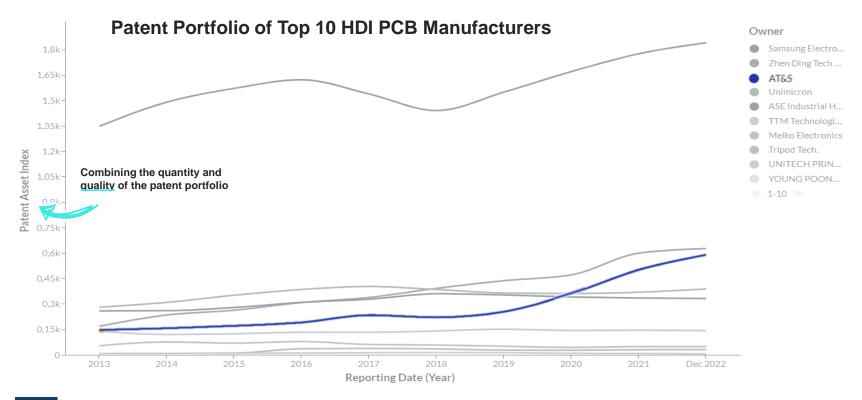
Structured workshops to protect alternative solutions





PROOF OF CONCEPT

AT&S has one of the most effective IP portfolios in its market segments



Recommendations for synthetic IP design

Separation of tasks in basic activities and synthetic IP design <</p>

External: Customer oriented

Internal: Resource-based

Dedicated budget

- Ensure basic activities (internal part of IP-department)
- Close networking with other departmens
- Direct connection to top management
- Keep an eye on the focus
- Defining an Invention Corridor
- Figure out quick wins when starting with synthetic inventions
- Allow room for creativity within IP department
 - Think in alternatives!



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