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Technical perfection, automotive passion.

**Coopetition:
Using High Performance Collaboration
to Commercialize Innovation**

**Jim Orchard
President Faurecia North America**



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State of Industry

Strategic Industry Characteristics

- **Shifting market share among automakers (Big 3 group is really the “Big 10...like EU”)**
- **Polarized financial performance among suppliers (Large gap between the strong and the weak ... getting wider)**
- **Bankruptcy, mounting supply chain uncertainty and risk among both automakers and suppliers (Private Equity refinancing ... changing landscape...recovery en route...)**
- **Increasing input costs and non-competitive cost structures among both automakers and suppliers (headwinds continue... some things do not change)**



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State of Industry

Strategic Vehicle Trends

- **Decreased cost**
- **Increased content**
- **Higher degree of perceived quality**
- **Differentiation opportunity for suppliers**
 - **Vehicle volumes < 50,000 within platform strategy...**



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State of Industry

Tactical Industry Characteristics

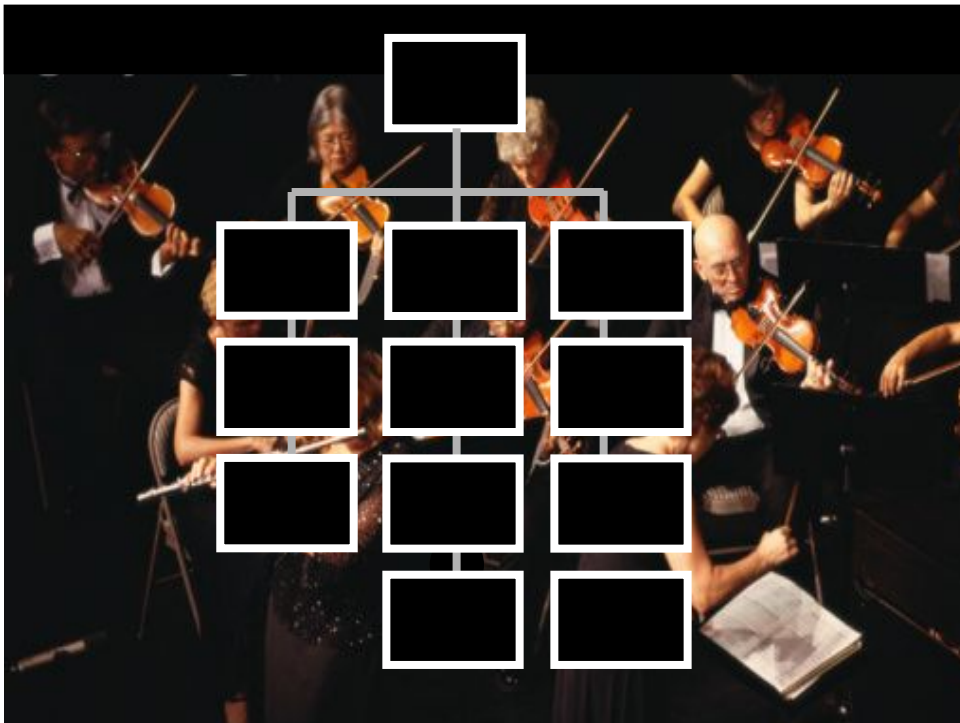
- **Customer aversion to risk**
- **Inability to determine market value of break-through technologies**
- **Internal and external resistance to change**
- **Resource constraints among all players**

- **Savoir-faire infuses global world-view into products that delight consumers**
- **Experience as eighth largest supplier globally**
- **Innovation in product and process design & accelerated focus into consumer driven or “outside in” innovation.**

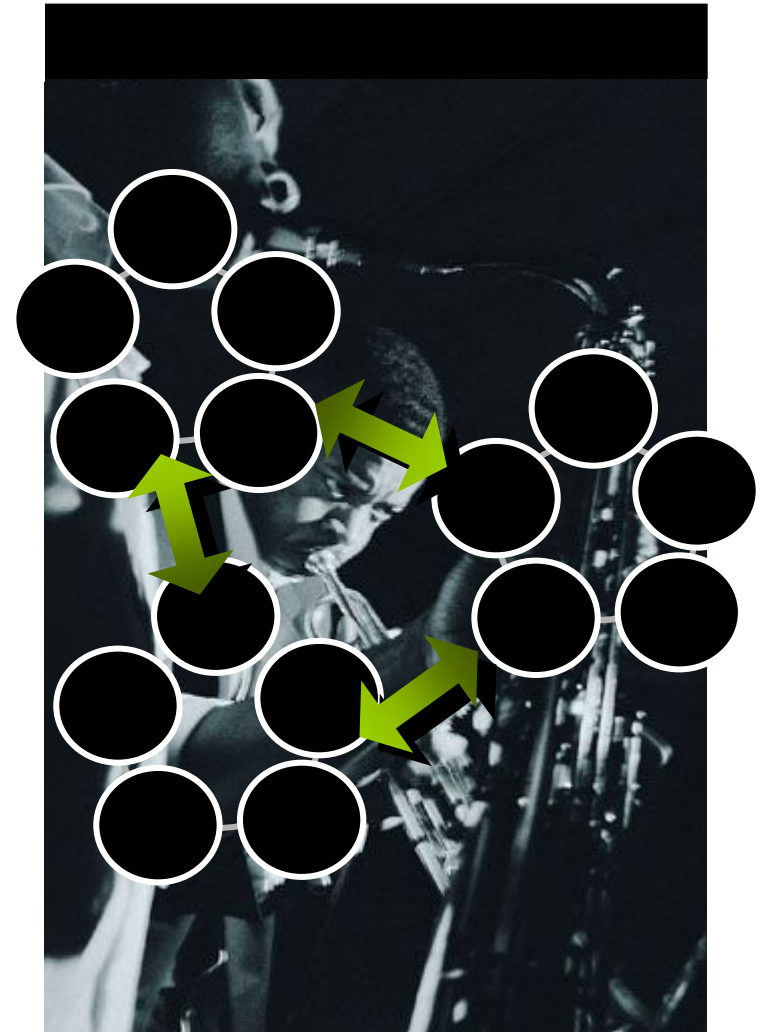
Innovation at Faurecia



Innovative Culture

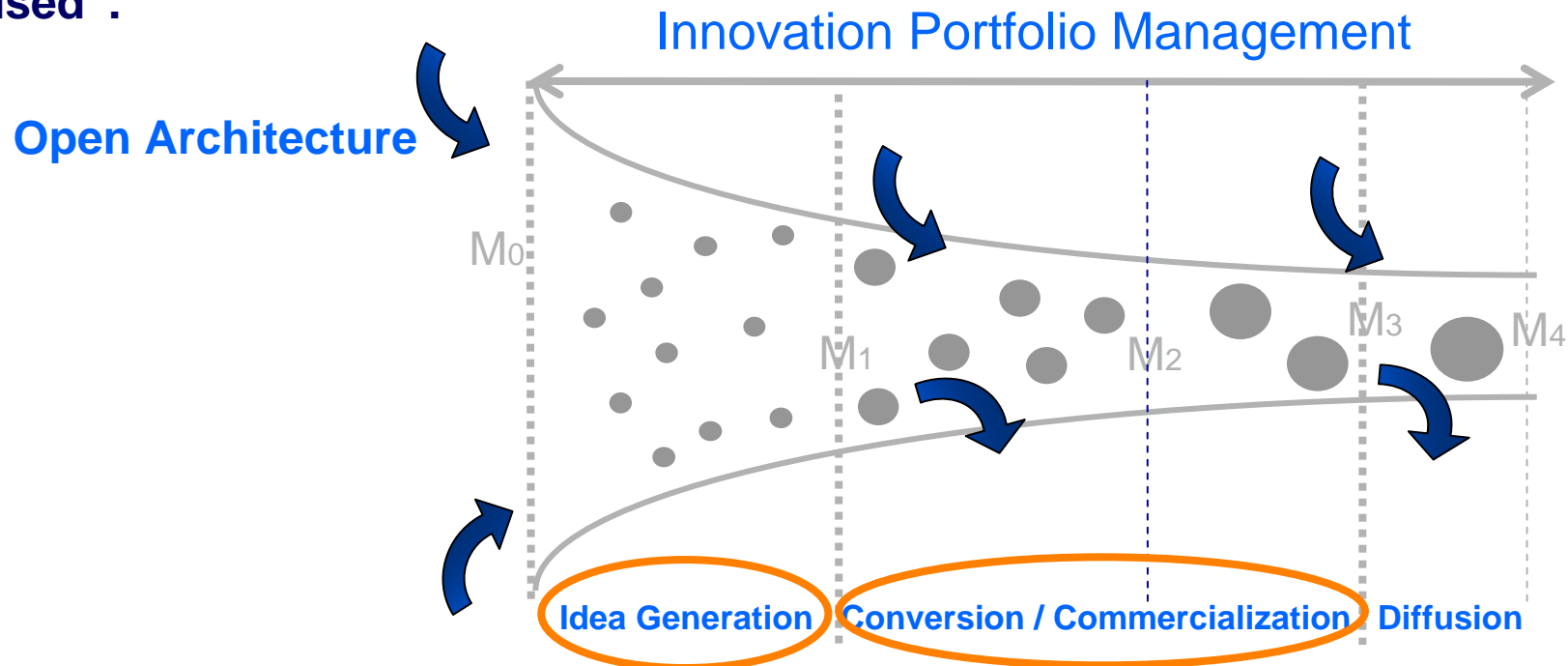


Inward focus



Outward focus

“Insight can be gathered more effectively if a non-competitive “co-op” model is used”.



Benefits of "Open Innovation"

- Leverage R&D developed / share development cost
- Extended capability for new ideas and technologies
- Potential revenue on internal R&D through sale or license of unused intellectual property
- Decrease levels of risk and resources, with the opportunity to extend beyond core business
- Create a more innovative culture, from the 'outside in' through continued exposure with external innovators

Lower Back Pain



#1 issue with today's designs

Poor or uncomfortable lumbar support accounts for 35 percent of seat problems in the United States...

[J.D. Power and Associates Initial Quality Study](#)

Back pain is one of the most common health problems in the United States. In any given year, 10 percent of adults experience back pain or other symptoms, such as limited mobility or stiffness. Each year, Americans spend an estimated \$24 billion on treatments for back pain...

[The Arthritis Foundation www.arthritis.org](http://www.arthritis.org)

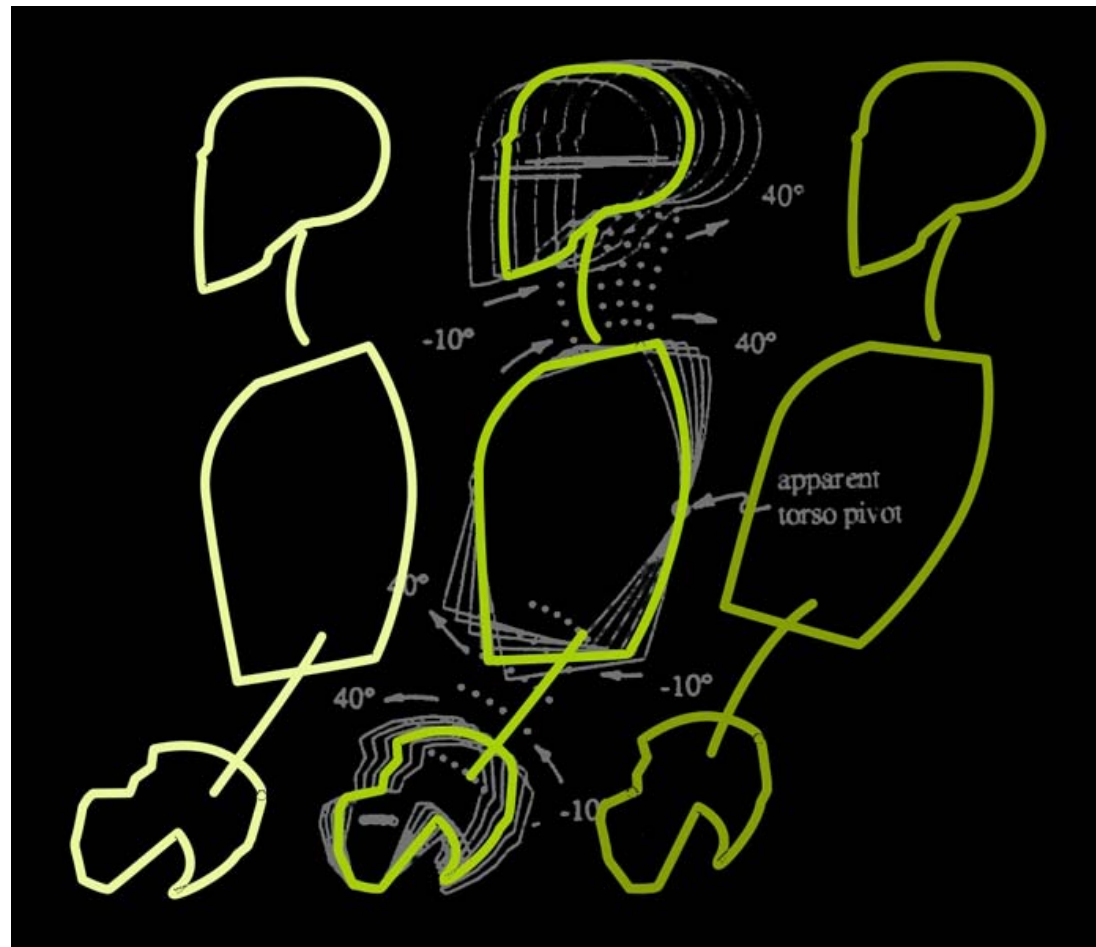
Lumbar Comfort

Research that goes beyond
traditional pressure mapping...



Lumbar Comfort

biomechanical range of motion...



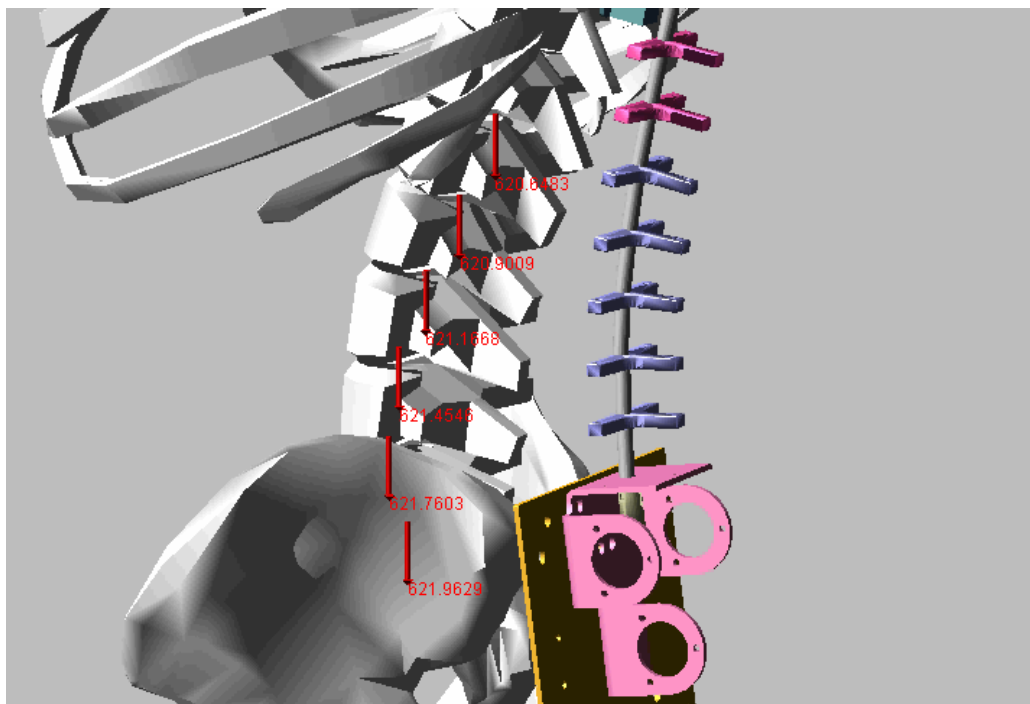
Kyphosis

Nominal

Lordosis

Lumbar Comfort

The Future: A true biomechanical analysis tool...



Lumbar Comfort

Next Steps: Develop a “sittable” LMM (**Lumbar Motion Monitor**)

Investment lasting 1 year divided between 3 seating industries

Development conducted at XXXXXXXX University’s Bio-Mechanical Laboratory led by a leading OEM Biomechanical Engineer)

Key Partners:



World leader in office seating design



World leader in aerospace seating design



World leader in Automotive



Lumbar Comfort

The Future: Pressure mapping +

Muscle Activity

using electrodes attached to affected muscles to measure the contractions

Muscle Oxygenation

using a Cerebral Oximeter to measure the oxygen saturation of muscles

Body Posture

using motion monitoring via electromagnetic transmitters attached to the body

LMM (Lumbar Motion Monitor)

Determines which elements of a task incur the highest risk of lower back disorders

Idea Generation: Advantages of a Cooperative Approach



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- 1. Efforts are magnified – combined budgets are leveraged**
- 2. Likelihood of finding compelling insights increases with multiple eyes**
- 3. Perspectives outside of one’s own industry strengthens the creative process**
- 4. New technologies can be commercialized faster when multiple industries “pull”**



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Conversion/Commercialization

High standardization
Low Mass
Low cost tools
Flexible/Re-use sustainability

Active Lumbar
“thinsulate” seat
Heat/Cool features

Sustainability recyclable



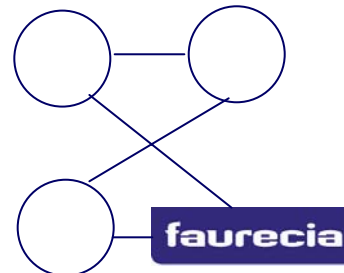
plastic frame



active lumbar



foam replacements



**Fully featureable – Sustainable
comfort seating**

IBM®

+



AutomotiveSupplierJam

March 7-10, 2007
77 consecutive hours



AutomotiveSupplierJam



Jam: What is it?

- Massive **on-line** discussion on **pre-defined topics**
- A **time limited** event
- **Participation from thousands** anywhere in the world
- **Facilitators** guide participants to build on each other's ideas
- Proven **Jam processes** to engage participants in real-time to generate deeper insight
- Jam Solution based on proprietary IBM **knowledge** and **technology**

A Jam is a facilitated virtual collaboration; it is neither a Blog nor Discussion Board



AutomotiveSupplierJam



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Jam: What happened?

We Jammed...

- 2,000 Automotive professionals
- 150 Organizations (113 suppliers)
- OEMs, Tier 1s, Tier 2s, Academia
Government Institutions
- Also participation from Europe
and Asia Pacific
- 1,540 ideas generated





Jam: 5 Change Concepts

Change Concept 1: Breaking the US OEM-Supplier gridlock

Change Concept 2: Convergence of virtual world and product development

Change Concept 3: Supplier to Supplier Competition

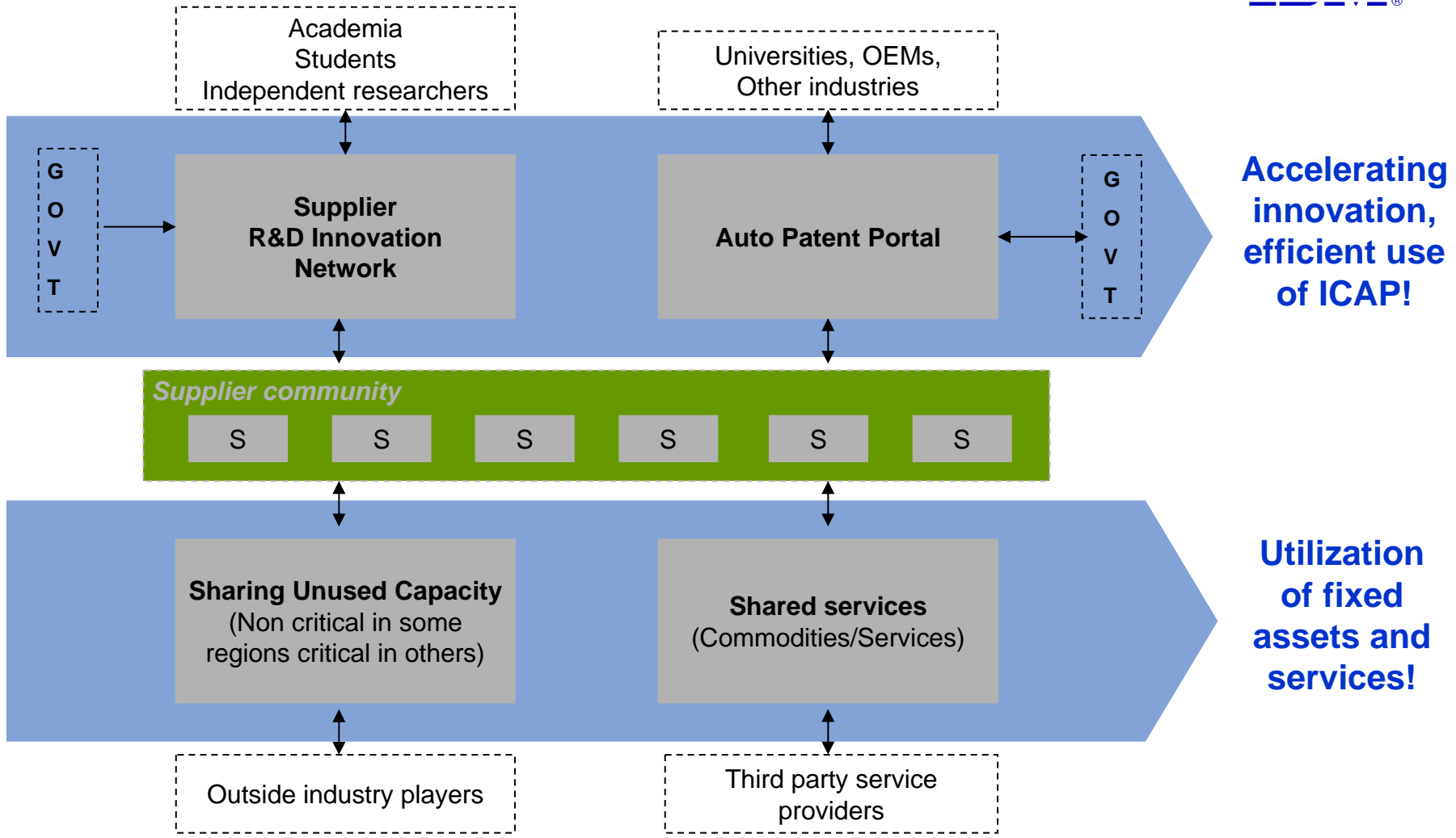
Change Concept 4: X-tier collaboration

Change Concept 5: Re-Brand & Re-image to engage the next generation workforce

Prioritization by supplier executives in a post-Jam results review workshop



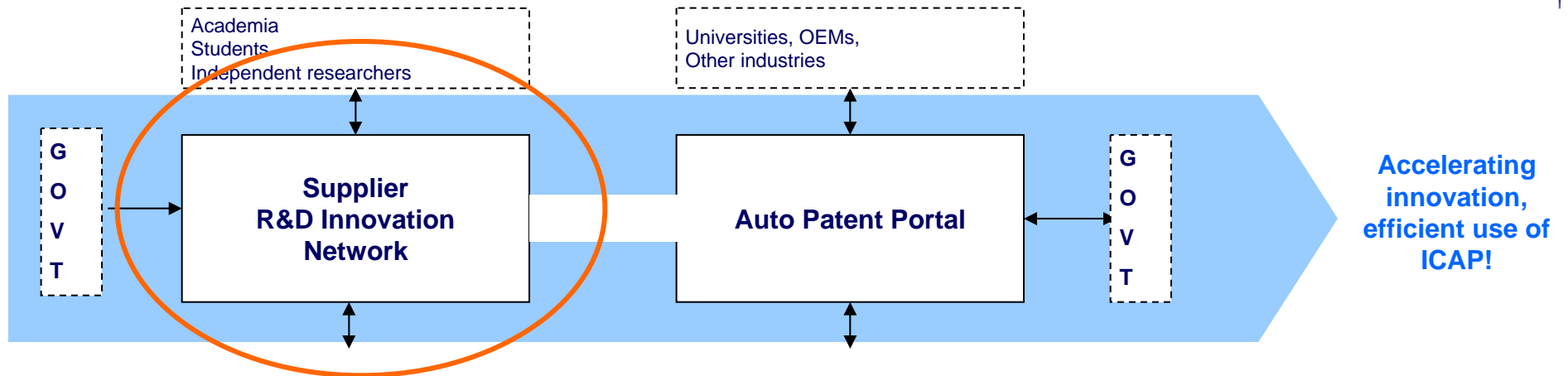
Supplier to Supplier Coopetition



Accelerating Innovation



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Accelerating innovation, efficient use of ICAP!

Supplier R&D Networks

- Government funds & resources
- University & student researchers
- Independent labs

Focused by Commodity or Technology

- Speed
- Cost
- Focus



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Supplier ER&D Innovation Network

- **Delphi Corp. approached OESA with a 56,000 foot facility that could provide a home for collaborative research**
- **OESA assembled consortium included U.S. Department of Energy - Oak Ridge National Lab, Automation Alley, Wayne State University and the U.S. Department of Defense - National Automotive Center**
- **Dubbed USAutoPARTs Consortium, which stands for U.S. Automotive Partnership for Advancing Research and Technologies**



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Companies

- **ArvinMeritor, Inc.**
- **Delphi Corp.**
- **Faurecia**
- **McLaren Performance Technologies, Inc.**
- **Visteon Corp.**



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Supplier ER&D Innovation Network

The real value of the consortium is the network of industry, government and academia that is forming to reduce the cost and time of advancing technologies from the drawing board to the automotive supplier.

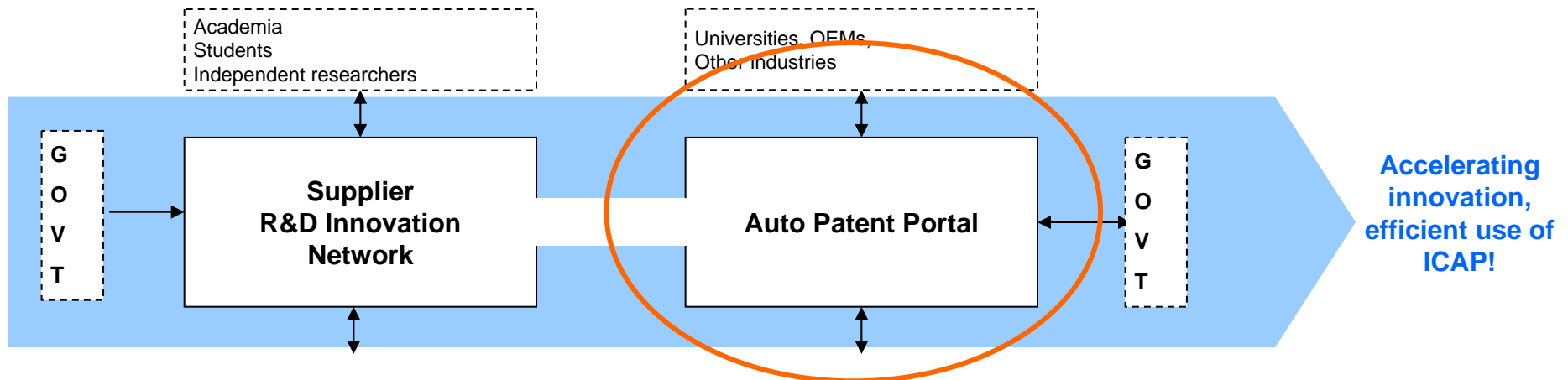
Collaborative research areas

- Lightweight materials-- magnesium and composites
- Thermal management --electric devices, power electronics and electric hybrid power systems
- Testing and standard protocols



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Accelerating Innovation



Auto Patent Portal

- 80-95 % of patents lay dormant

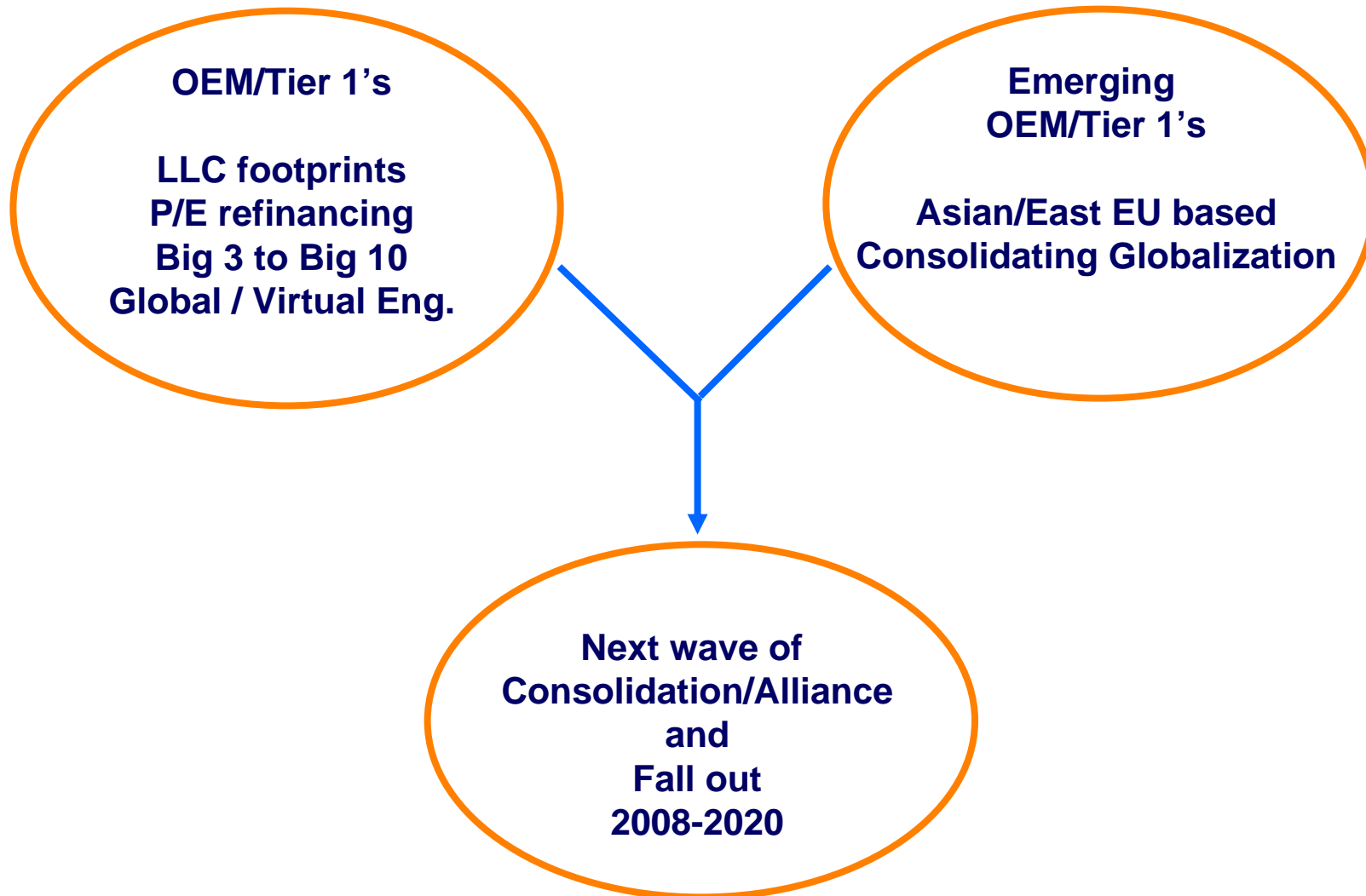
Share them! Make some \$ on them

- 3M alone has 11-13,000 dormant patents
- Top 10 patent generating companies in 2005 had 4,588 and average 471/yr for 5 years.

The next battleground : reverse flow globalization



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Conclusion

What will set companies apart will be investment in technology and innovation



To the extent we can support this “leanly” with co-optive collaborations, the better prepared to deal with the next battlefield.

Thank You



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