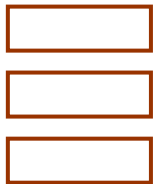


GEN3 PARTNERS



The How-to of Systematic Open Innovation

APPLIED
DISCIPLINE



GLOBAL
KNOWLEDGE



PREDICTABLE
IMPACT

March 2011



GEN3 PARTNERS

GEN3 is the Open Innovation Services Provider –combining a systematic methodology and a global knowledge network of thousand of scientists and engineers, producing real innovation impact.



Who is GEN3 Partners?

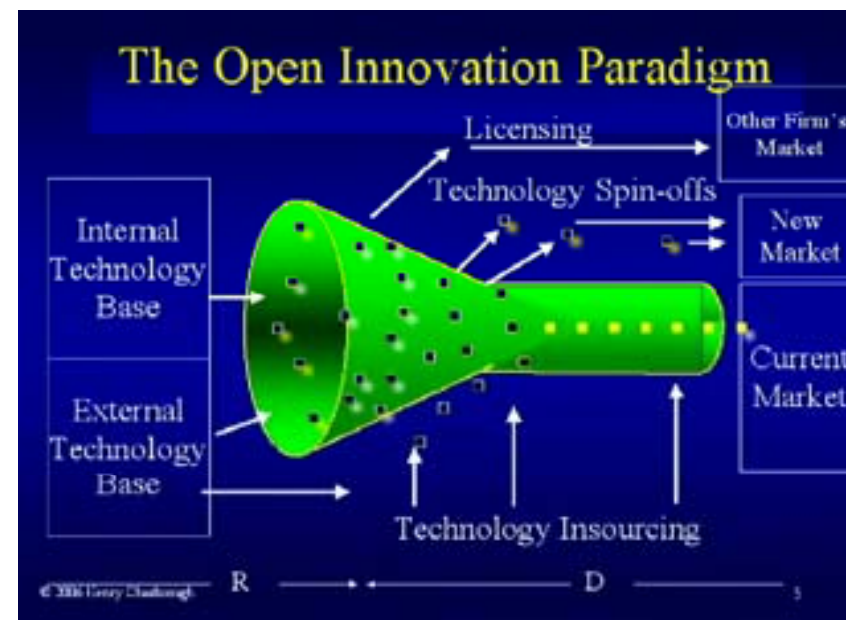
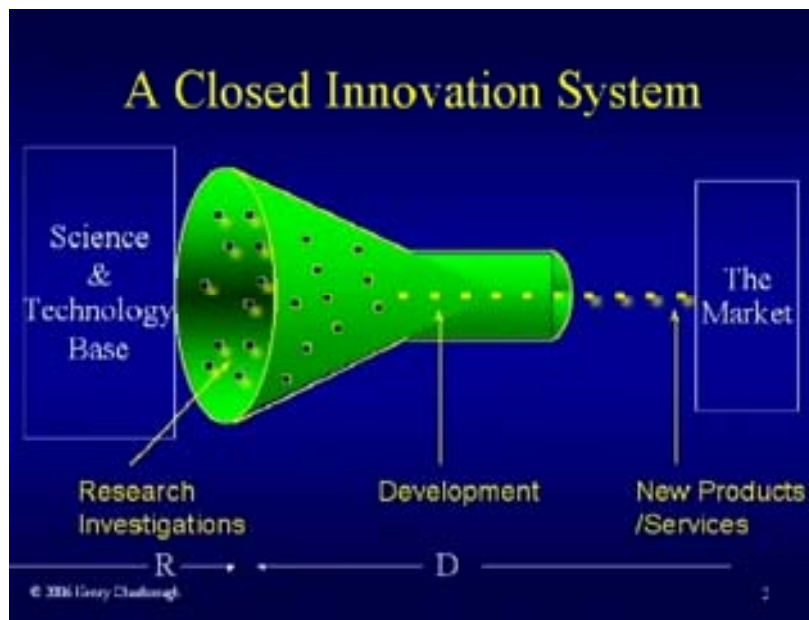
- An experienced group of world-class methodologists, scientists and engineers. GEN3 is the largest TRIZ-based innovation services provider in the world (both in terms of annual revenue and number of employees)
- Headquarter in Boston, Technology center in St. Petersburg, QM&E as Gen 3 Partners Korea



GEN3 Offices: Boston (Headquarters) ● St. Petersburg, Russia
● GEN3 Partners Korea

Era of Open Innovation

Open Innovation is moving more and more from an intriguing concept into proven operating practices as major companies develop and deploy this core capability into their innovation and R&D platforms.



Open Innovation is based on the idea that the R&D paradigm of doing everything in house has become obsolete in today's global market

Benefits of Systematic Open Innovation

- Open Innovators achieve greater innovation impact and faster time-to-market with less risk and higher predictability...

Greater Innovation Impact

Faster Time-to-Market

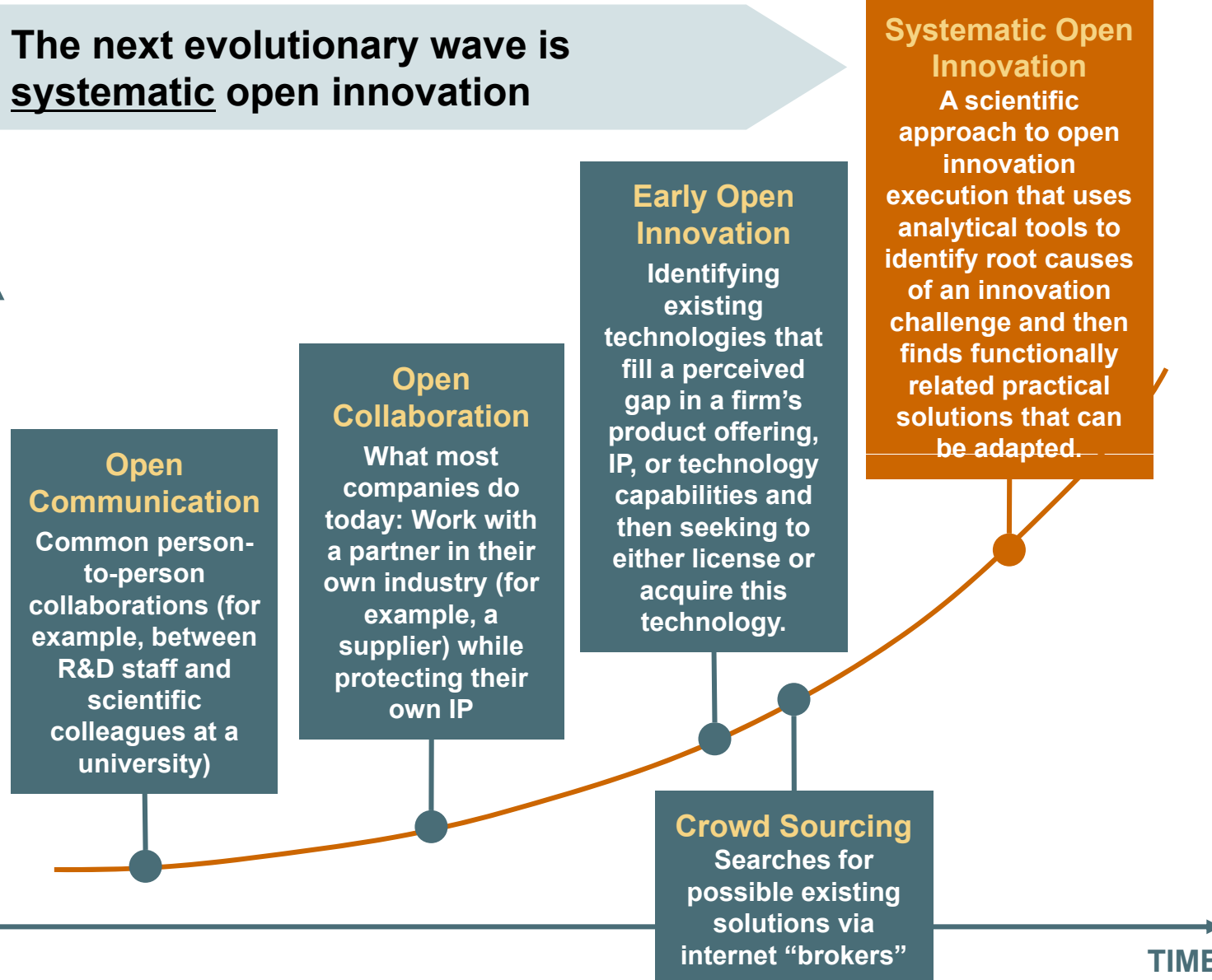


Less Risk

Higher Predictability

- Here's how...*

The Evolution of Open Innovation

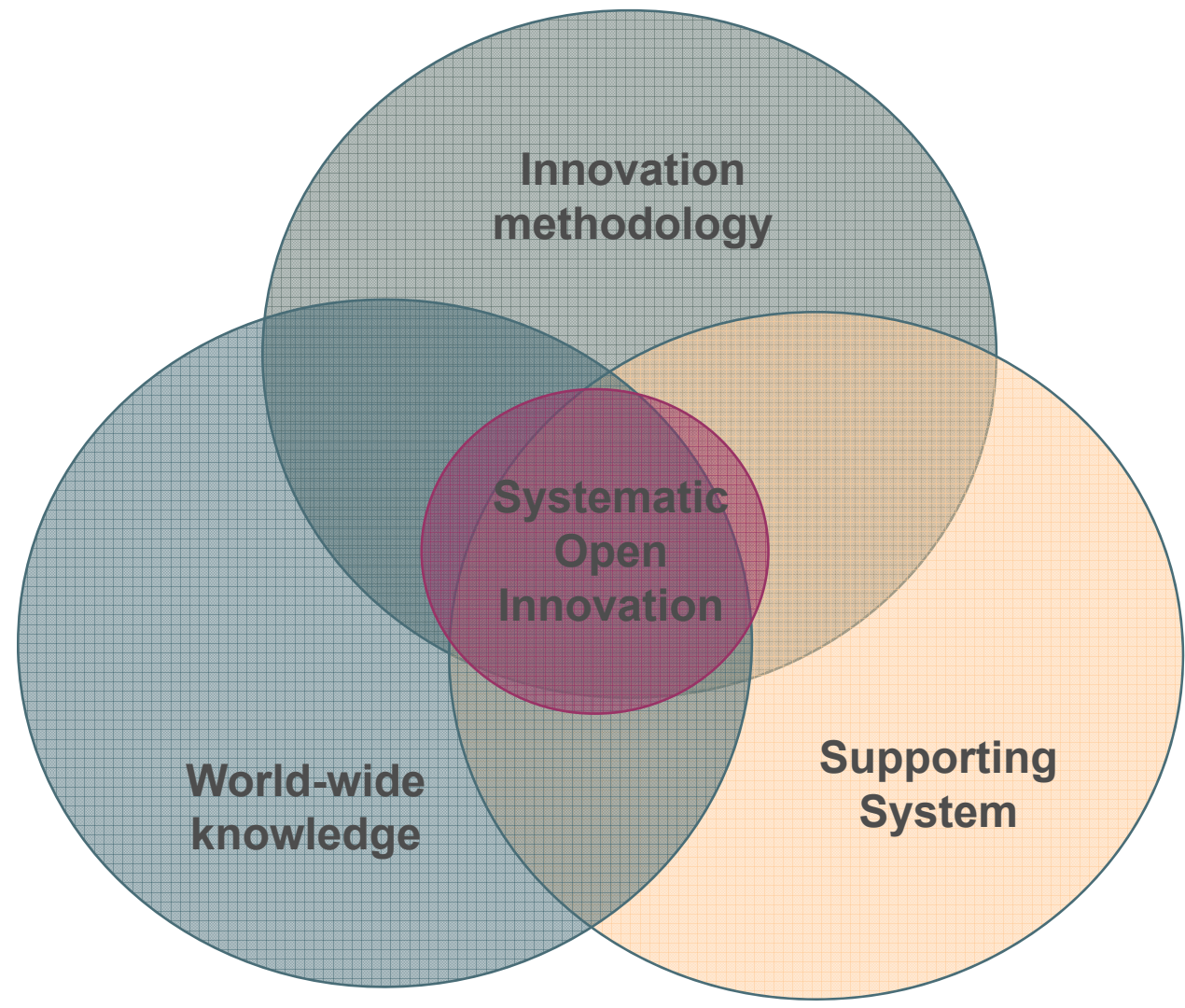


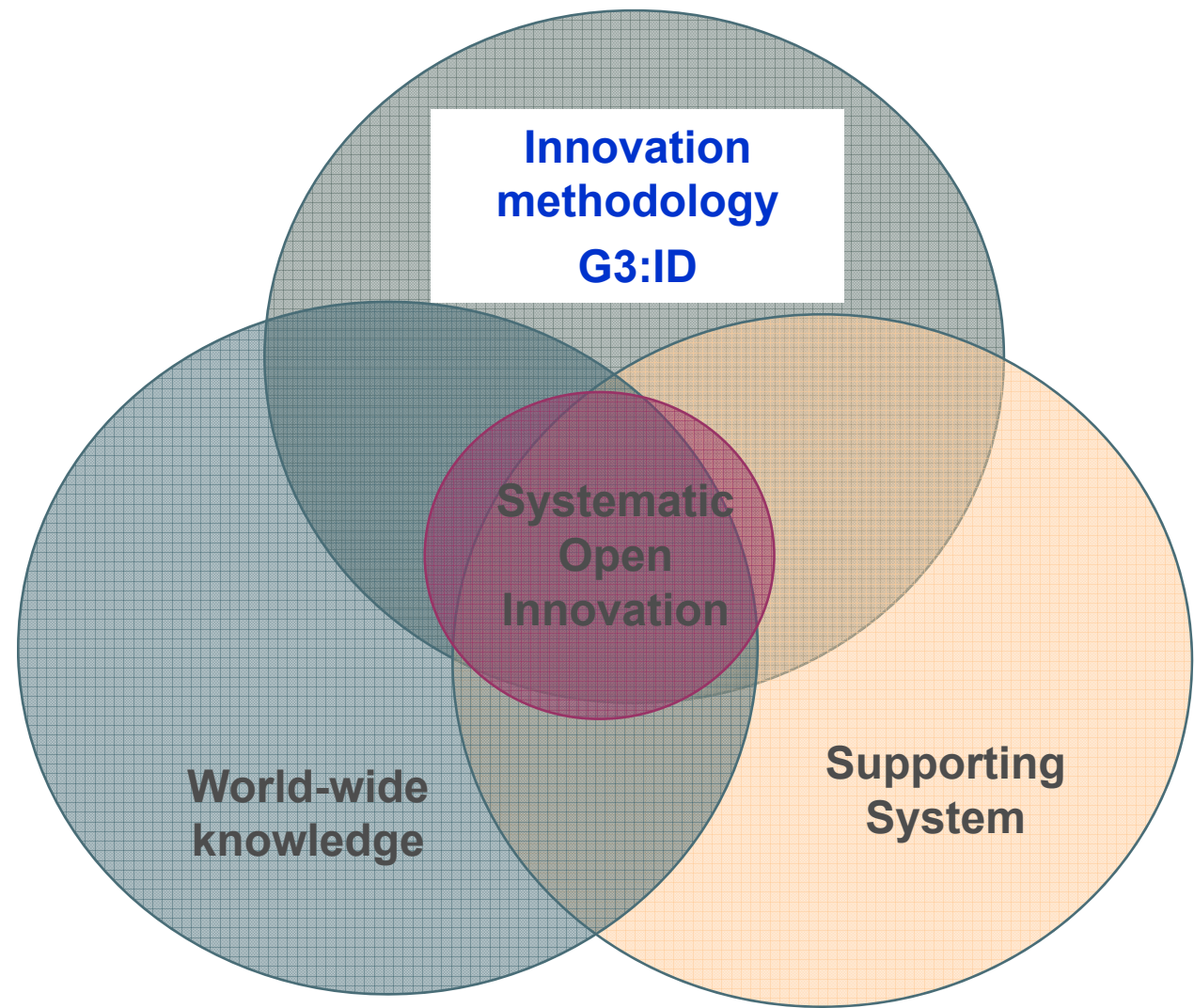
Systematic Open Innovation

Ensures that any innovation opportunity or challenge is rigorously analyzed so the right problems are attacked from the beginning

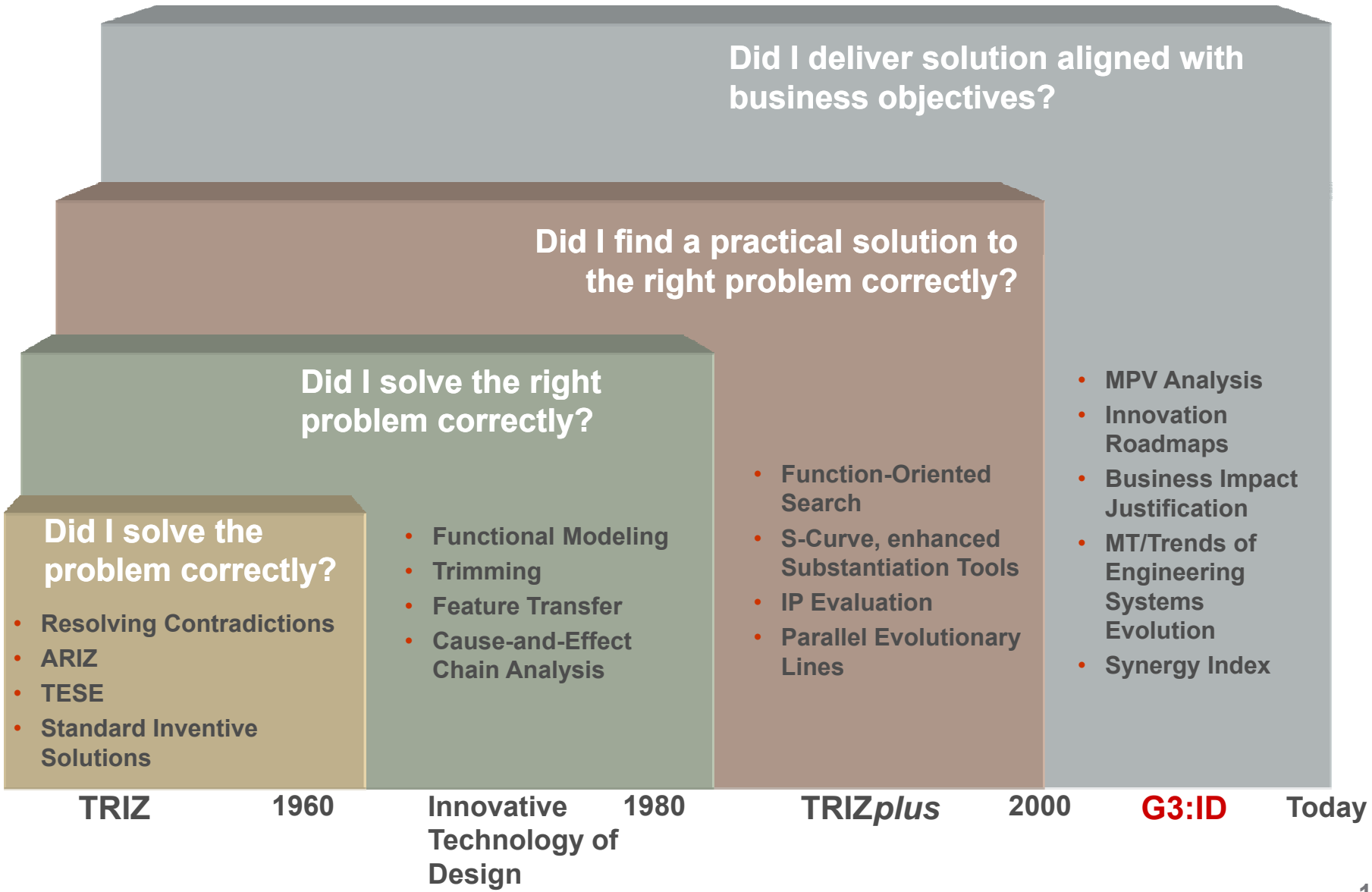
Eliminates unproductive and lower value efforts and captures and adapts proven solutions from other industries

Results in securing critical IP, reducing risk and dramatically improving time to market

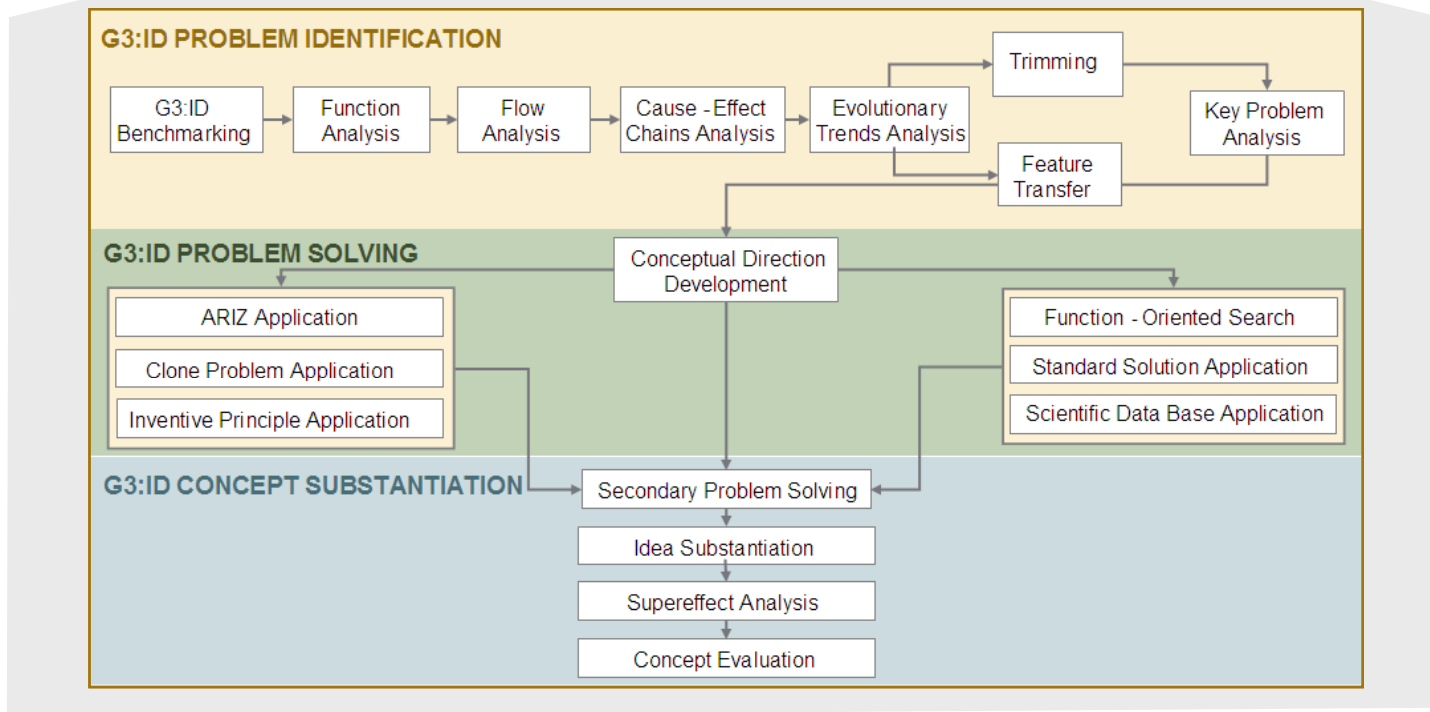
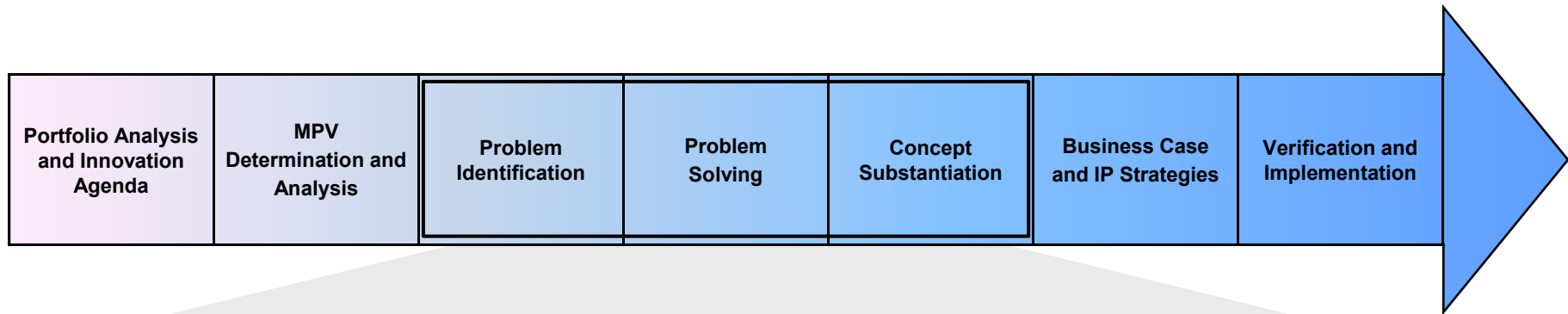


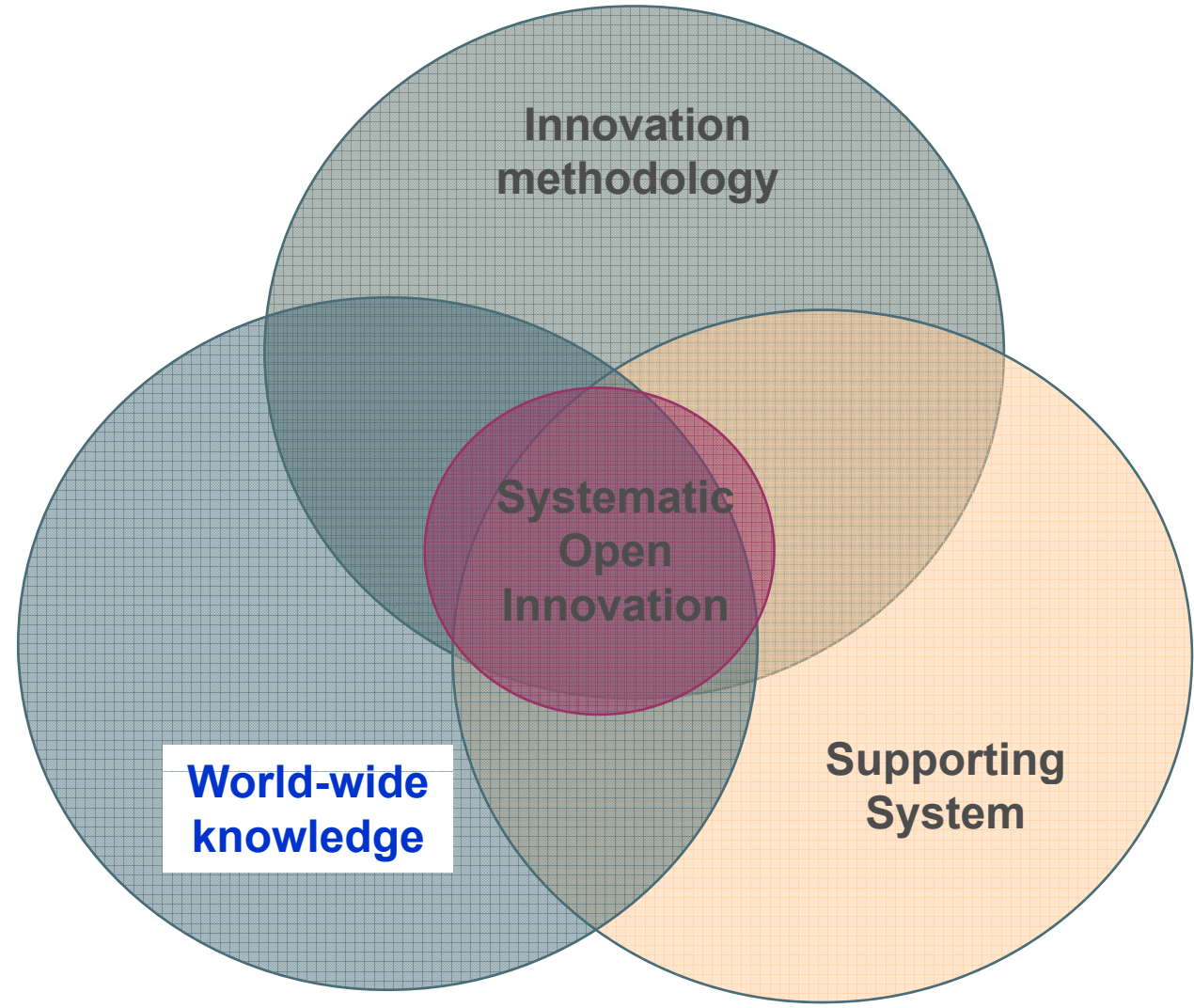


Evolution of Science of Innovation

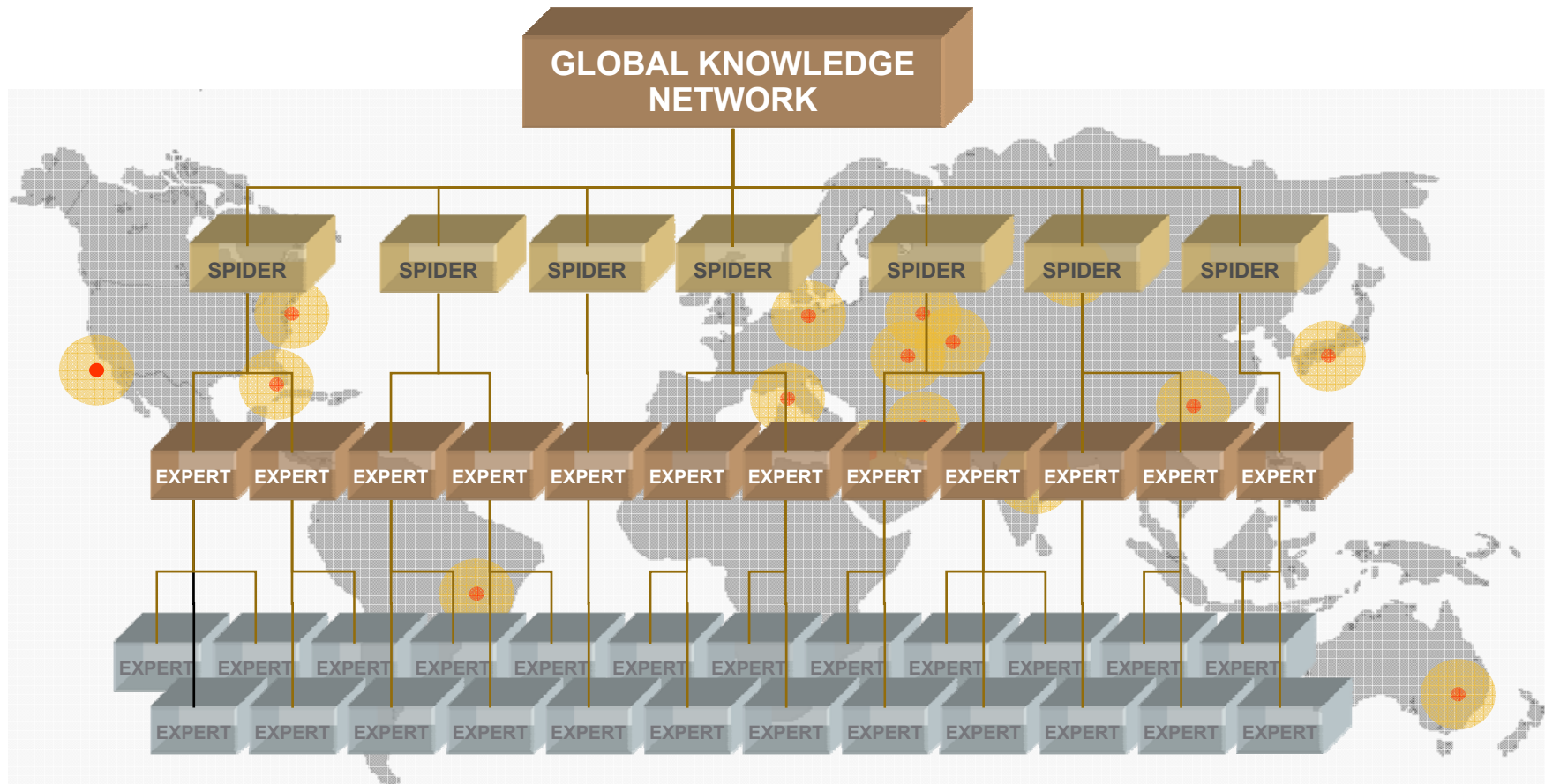


GEN3 Innovation Discipline(G3:ID) Process and Methodology



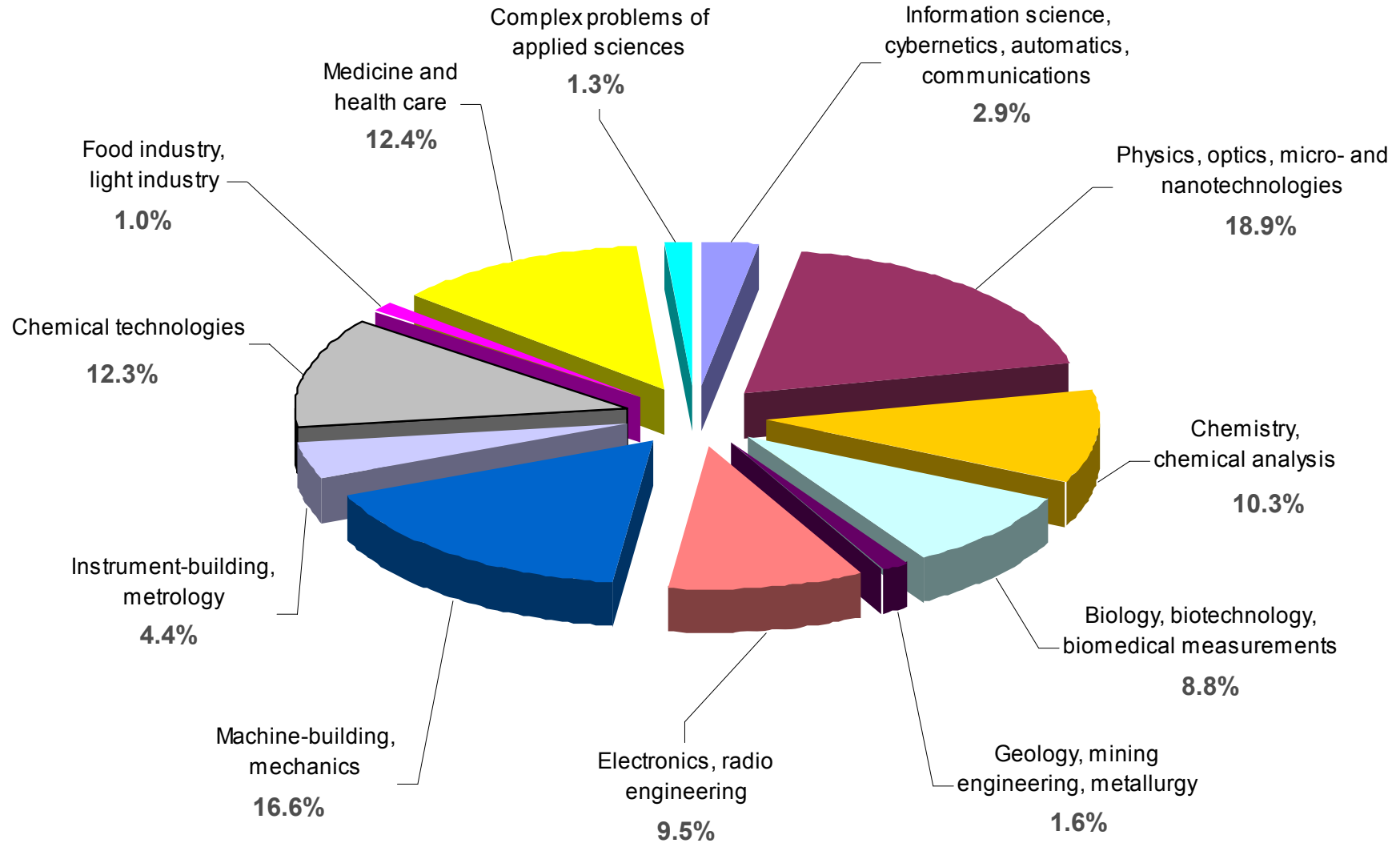


GEN3's Global Knowledge Network: over 8,000 scientists and engineers around the world covering virtually all areas of expertise

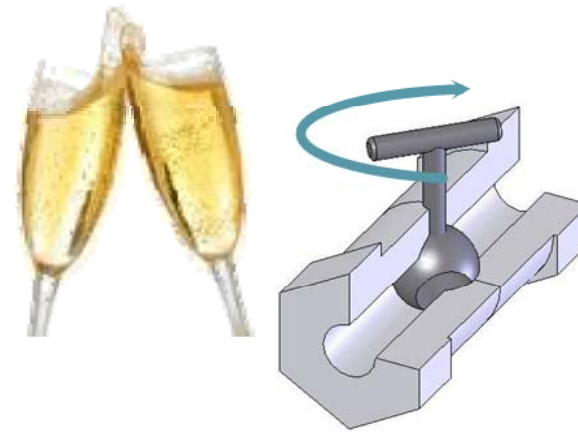
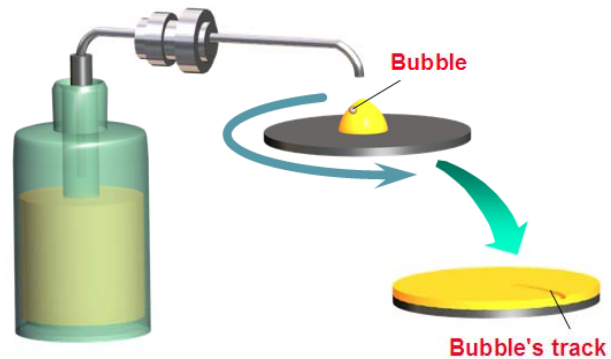


GKN: Distribution Of Experts By Branches Of Science And Engineering

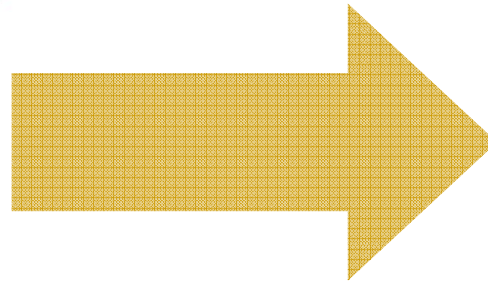
GKN covers all areas of applied science and engineering



Adapt existing solutions, don't always invent



**FROM
MICRO-CHIP
PROBLEM**



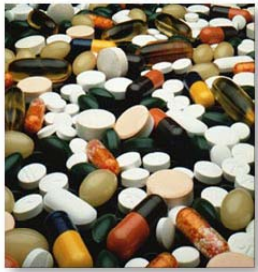
**TO CHAMPAGNE
SOLUTION**

The benefits of systematically identifying and adapting existing solutions are huge, requiring less resources and providing greater speed-to-market

- Innovation Challenge: Utilize global knowledge to achieve more effective innovation faster
- G3:ID tools that address this challenge: Function-Oriented Search (FOS), Global Knowledge Network (GKN).
- FOS and GKN Synopsis:
 - **There are proven technologies somewhere in the world that can address your key problems**
 - **The Leading Area is an industry or scientific field in which similar functions have high importance**
 - **Functions are the “Esperanto” of science and engineering**
 - **Global *knowledge*, not global network**

FOS & GKN Example : Allergy Prevention

Existing Technologies:



Anti-allergy medicines



Nasal ointments

All have some flaws:

- High breathing resistance
- Conspicuous
- Side effects
- Ineffective
- Expensive



Nasal filters

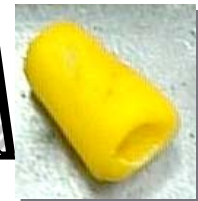


Masks & respirators

FOS & GKN Example : Allergy prevention

Existing technologies all have some flaws

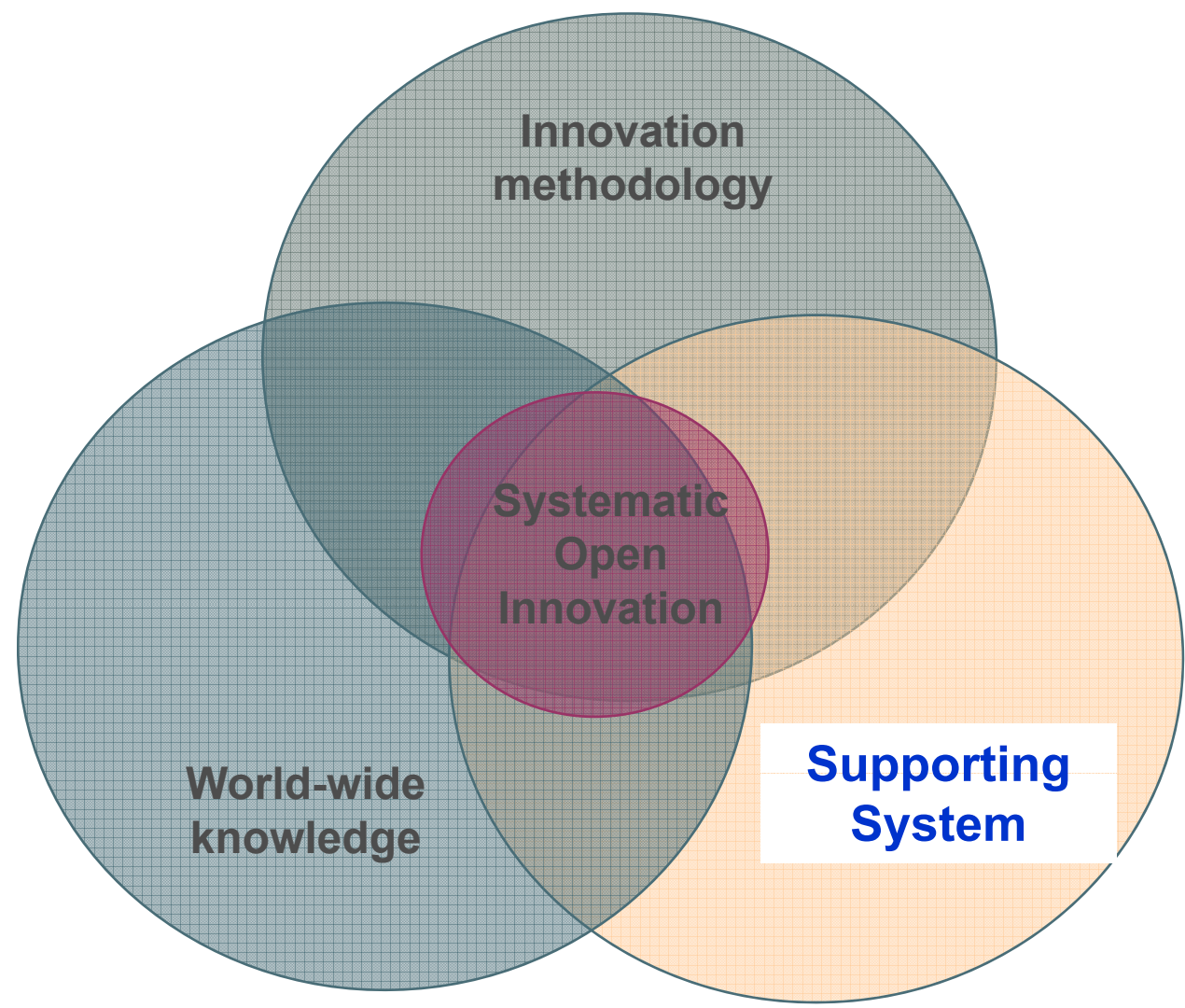
- Initial problem statement
 - How to prevent allergies?
- Identified Key Problem (Contradiction)
 - Pores of filter must be small to stop particles BUT big to allow easy breathing
- Functional translation
 - To trap pollen from inhaled air → To separate particles from a gas flow
- Identified best solution
 - Leading technology area: Industrial dust collectors, cement production
 - Best technology: Industrial cyclones. Action Principle: centrifugal separation
- Secondary Problem solving
 - Identified secondary problem: how to adapt the cyclone to the nostril?
- Solution: Healthy Breath filter (inserted into the nostrils)
 - Vortex chamber with spiral inlet geometry, sticky walls, breathing creates air flow
- Impact: 95% effectiveness for particles $> 5\mu\text{m}$, low breathing resistance, low cost
- IP protection - US, EU, Japan, China

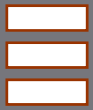


FOS allows the cross-over of multiple disciplines of science and engineering



GEN3 Systematic Open Innovation-Supporting System





- **MPV and One Banana Please!**
- **GEN3 Partners Korea Case Study:**
 - **TRIZ application to Nano-material development for Biomedical Science**
 - **Non-technical Area**