Pipeline Research Council International, Inc.

Insights On Advancing Technology to Market

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LEADING PIPELINE RESEARCH

it's a Competitive World

Globalization, Internet, National Development programs and other high speed communications make the world of technology development more competitive.

The competition for R&D dollars is global so securing them needs detailed attention not just to research but delivery.

Securing R&D investment in the future will need new skills and improved focus.

- You need to do your homework –

• Engage with the end users early.

• Understand when they need the technology – business intersection.

•There are no new ideas? – do the background and now if similar projects have been completed or currently exists somewhere in the world.

• Define why yours is different and how it will be delivered.

Moving a research idea to a successful commercial conclusion is a journey that requires a well defined pathway

Readying Technology for Deployment is a Multi Skill Approach.

Technology has no value to a pipeline operator until it is successfully deployed.

■ The challenges of deploying the technology are often as big a hurdle as developing the technology itself.

■ Researchers are good at research but often poor at the issues of commercialization.

■ Researchers are often not the best people to build and solve deployment solutions.

'Involve the right people'

Key Items That Aid Success

- Start with the end in mind – understand what the technology will look like in deployment.

- Be realistic in timeline estimations for technology development and deployment – researchers are commonly over optimistic in their timing.

- Estimate what the full cost of delivering the technology will be. Researchers almost always underestimate the full cost of the development cycle.

- Break the development into stage gates especially on programs that run multiple years. Ability to demonstrate 'wins' or achievements retains interest in the project by those funding it.

The Business Case Is Critical

- Define, articulate the business case for the technology – have those with the correct skills help researchers define this.

- Technology may be 'cool' but it has to have value to attract investment.

- Technology developed that is never utilized is wasted R&D investment.

Most pipeline operators are interested in funding solutions not fundamental research.

➢ Extend run life.

➢ Mitigate risk.

➢ Reduce OPEX.

➢ Reduce CAPEX.

➢ Improve environmental performance.

➢ Improve integrity determination.

Early Commercialization Strategy is Critical

- Define your IP strategy early on – it often dictates the commercialization path.

- You need to ensure protection for the research if required.

- Note number one for pipeline operators funding research is protecting 'freedom to operate' with the technology.

- Engage with commercialization specialists – researchers often do not have these skills.

- ➢ # 1 Freedom to operate is paramount – restrictive covenants or monopolies kill technology.

- ➢ Are you deploying as a product?

- ➢ Are you deploying as a service?

- ➢ Will you build the product, partner or seek to license the technology.

- ➢ Does the end user have to invest in changes to adopt the technology?