

# Innovation Risk

## Global Collaborative Engineering

A White Paper

### ABSTRACT

#### Managing Innovation Risk with Diversified, Global Engineering Solutions

In today's global marketplace, technology-based companies are in a constant race to develop innovative solutions to satisfy growing customer demands, enter markets and maintain their competitive advantage. This race for innovation has created a number of significant business challenges such as streamlining operations, containing engineering costs, developing flexible yet scalable solutions amongst others for companies around the world.

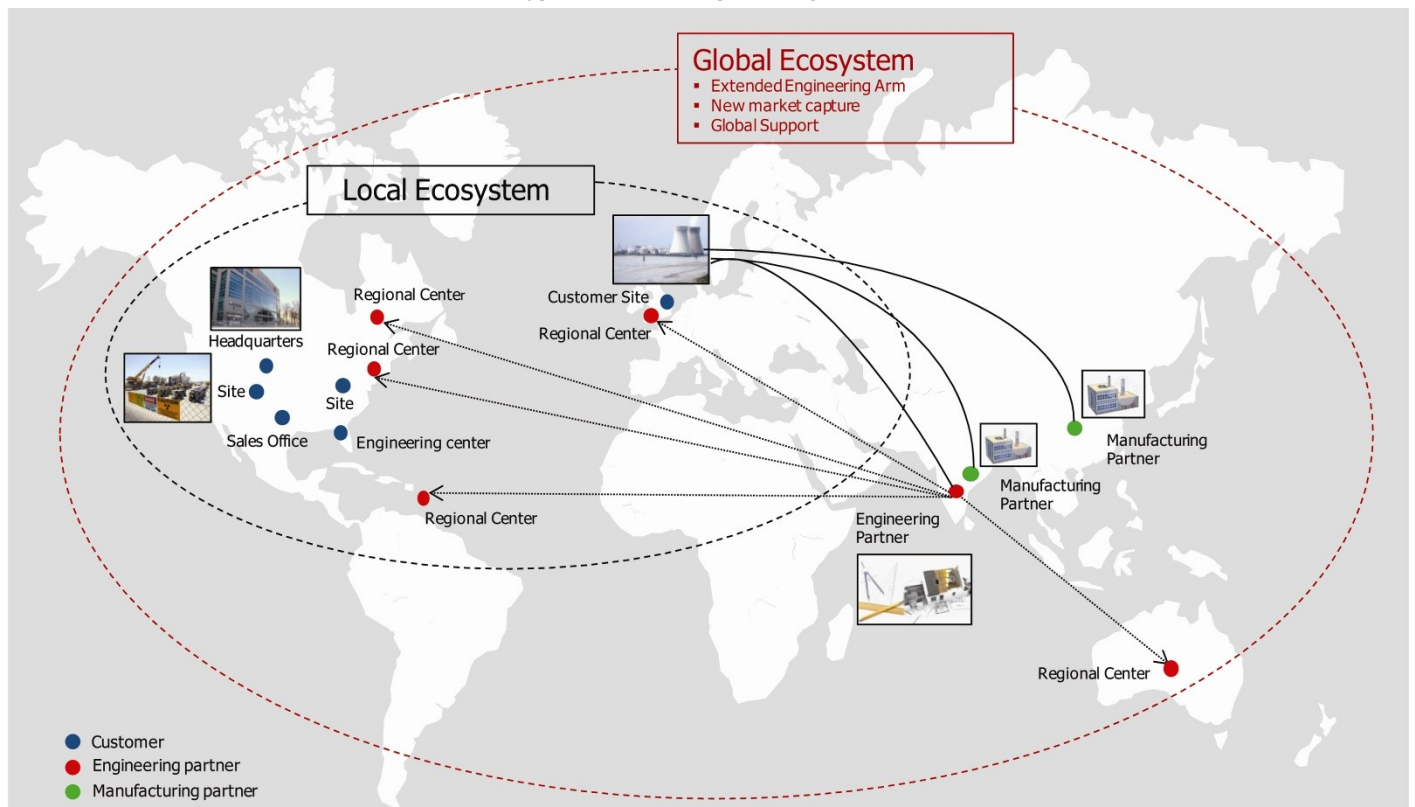


## Managing Innovation Risk with Diversified, Global Engineering Solutions

In today's global marketplace, technology-based companies are in a constant race to develop innovative solutions to satisfy growing customer demands, enter markets and maintain their competitive advantage. However, this race for innovation has created a number of significant business challenges for companies, including the critical need to

- Contain engineering costs required for specialized products and services.
- Streamline manufacturing and accelerate time to market.
- Develop flexible, scalable solutions to meet customer demands and prevent the loss of business.
- Safeguard and retain intellectual property (IP).
- Maintain quality assurance.

### A Typical Global Engineering Solution



To address these challenges and manage the risks associated with innovation, many successful companies have adopted a flexible strategy that includes

- Replacing a local, centralized engineering ecosystem with a global, diversified engineering ecosystem.
- Leveraging the resources of a qualified engineering services provider.

Based on experience, these companies have found that a global collaborative engineering strategy incorporating these two elements has helped them cut unnecessary costs, accelerate product development, increase market share and support their long-term profitability.

## **Four Areas Where You Should Globally Diversify Your Innovation Portfolio**

In many ways, it simply makes business sense to develop global solutions for today's global markets. In the past, technology-based companies could rely on a local engineering approach centered on a single facility. However, local engineering ecosystems have been repeatedly overwhelmed by soaring demands for more resources and a "global footprint" that integrates engineering, manufacturing and operational support across multiple regions and markets.

In effect, companies need to diversify their engineering processes just like any other resource investment.

Infotech Enterprises has identified four major areas of investment that can be globally diversified on a highly cost-effective basis:

**Engineering and Design.** By shifting your engineering and design efforts from reliance on a single local staff to a global network of highly qualified engineering professionals, innovation becomes an around-the-clock process, unconstrained by time zones and holiday calendars. Additionally, globally diversifying the responsibility for creating new engineering designs enables you to capitalize on a broad and experienced base of educated expertise thus resulting in better products, less expensive manufacturing, and more opportunities for new market advantages.

**Long Term IP Protection.** In today's marketplace, IP is best protected with a sound knowledge retention strategy and rapid capitalization via high quality engineering designs. Outsourcing your most vital engineering and design tasks, far from exposing your intellectual property to risk, can in fact offer your IP much stronger protections than does isolating them to a limited and localized staff. Lower worker attrition, enhanced security measures and a greater ability to rapidly turn quality designs into profitable products are all important protective values offered by today's engineering provider.

**Process Scalability.** Quality engineering design only translates into profitable global production when the processes that depend upon them are scalable - when engineering, manufacturing, quality assurance and customer service processes are integrated and specialized enough to offer true global efficiency. The challenge of process scalability offers another opportunity for leveraging global talent to create profitable market offerings, by drawing on the experience and knowledge of experts proficient at creating fully scalable, global and process-driven engineering enterprises.

**Quality Assurance.** Inseparable from the issue of knowledge retention is the challenge of increasing that knowledge, of preventing engineering errors from entering the system and opportunities for quality improvements. A strong quality assurance process serves as an important prevention tool. Efficiently diversifying your quality management on a global basis offers your company the ability to respond to risk more quickly, effectively and profitably than would ever be possible on a strictly localized basis.

In any area of resource allocation, the key to success is careful planning and portfolio diversification. This helps to assure necessary redundancies, respond rapidly to market signals, and improve decision making. Your innovation portfolio should be no different. By globally diversifying your engineering talent and capitalizing on your most valued intellectual assets, your company can build and maintain a commanding position in today's global markets.

## **Securing the Knowledge That Drives Your Business**

One of the greatest risks any company faces today involves knowledge retention. Workforce attrition through retirements, layoffs and normal turnover can represent an immense risk to companies dependent on the technical knowledge, talent and skills of their employees. The departure of your engineering staff for other companies and projects can expose your firm to retraining costs, development delays and even intellectual property loss.

However, an engineering services provider can often offer extremely low workforce-attrition rates. Providers who are able to combine low personnel attrition with long-term account dedication and strong IP protections can deliver a powerful engine for innovation that extends well after product launch. In selecting an engineering services provider, we recommend that you consider the following:

- **Check** that the engineers assigned to your account are dedicated exclusively to your account. Many low-cost engineering firms will rotate their staff among different client accounts on a regular basis, transferring valuable staff to larger jobs just as they have become fully trained for your needs. Insist that your engineers remain on your team on a long-term basis, and are not shared with other accounts. This will create the knowledge-retention support you need to fully protect and capitalize on your engineering advancements.
- **Make sure** that your IP is protected via strong, industry-established security measures. Ask if your engineering provider subjects their data retention policies to regular and intense security audits, and if their processes are fully ISO 27001-compliant. You should also verify that their engineering teams are physically separated from one another and that all documents and data are properly secured to prevent sensitive information from being distributed beyond your team.
- **Take concrete steps** to retain ownership and control over all designs and inventions created on your behalf by the outsourced firm's engineering staff. While it is not unusual for engineers' names to appear on resulting patents, the ownership of the patents should remain with your company. Your ownership should also include any associated IP created for your account. Address this issue early and make sure that IP ownership terms are clear.

Securing your company's ability to build and develop expertise over the long term is crucial to your ability to globally compete. By diversifying your knowledge retention processes, you can ensure that your exposure to this vital area of risk is minimized and well managed.

## **Quality Assurance: Structuring Innovation into Everyday Business**

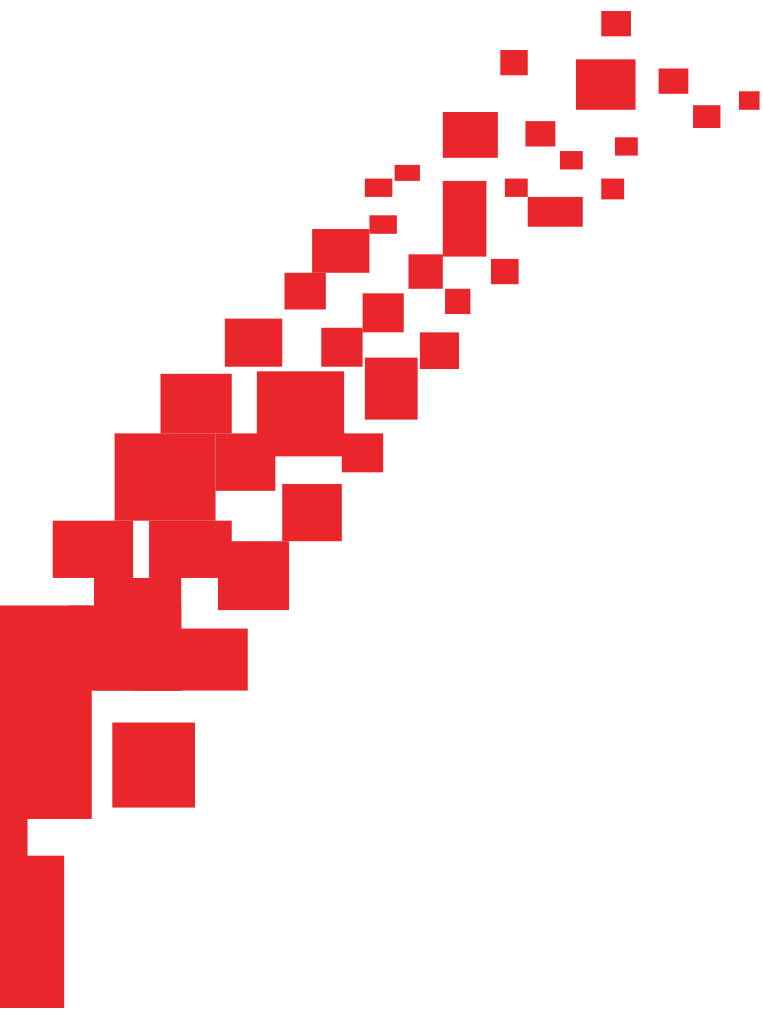
As new ideas are introduced to increasingly time-sensitive markets, the demand for strict and highly reliable quality assurance becomes inseparable from risks involving innovation. New engineering designs bring with them the possibility of production flaws, unforeseen design failures, and other risks associated with not meeting the specific needs of a changing and sophisticated customer base.

Your engineering services provider should routinely integrate sophisticated quality assurance practices into every component of their engineering and design projects. Make sure that they maintain a comprehensive system for rapidly preventing and correcting any defects in their designs. You should also determine whether they can identify root causes for flaws and prevent them from reoccurring. In addition, ensure that their quality assurance programs are compliant with Six Sigma and ISO 9000 best practices, creating a protective layer around their design processes that will mitigate the risks that accompany new engineering advancements.

Extending beyond product design and iterative improvements, quality assurance serves as the keystone for any truly scalable global manufacturing enterprise. By soliciting customer feedback and continually scrutinizing designs for areas of improvement, your engineering services provider can help your company generate a growing knowledge base that can be effectively leveraged into the design and production of higher quality, more competitive products.

## **Risk Management with Global Engineering and Infotech**

Innovation can bring both opportunities and risks. Managing both effectively is a vital step towards producing steady, consistent market advancement. Strategic global engineering today provides one of the most promising avenues for helping companies better manage the risks associated with innovation while protecting intellectual assets from loss and underutilization.



## About Infotech Enterprises

Infotech Enterprises provides leading-edge engineering solutions, including product development and lifecycle support, process, network and content engineering to major organizations worldwide. With nearly two decades of continuous growth, Infotech leverages a "Global Delivery and Collaborative Engineering Model" to achieve measurable and substantial benefits for our clients.

Whether your organization needs to design innovative products faster, optimize R&D costs, increase market share, or enhance operational efficiency or maximize the return on investment in your networks, Infotech Enterprises is the ideal partner.

With Global Headquarters in Hyderabad, India, Infotech employs over 8,000 associates across 30 global locations. We adopt a proactive approach to serve our clients with our best-in-class delivery centers in North America, Europe, Middle East and Asia Pacific. Our clients span multiple industries such as Aerospace, Consumer, Energy, Medical, Heavy Equipment, Rail, Semiconductor, Telecom and Utilities and include 22 'Fortune 500' and 27 'Global 500' blue chip organizations.

In order to consistently create and deliver services that exceed clients' expectations and enhance their business agility, Infotech employs a framework of robust internal processes to ensure IP Security, quality-of-solution and on-time delivery. Our quality management framework is compliant to global standards which include: ISO 9001, ISO 27001, TL 9000, AS9100B, ISO 13485 and CMMi Level 5.

Contact us today to learn more about how our global engineering services can help transform your innovation risk into steady and secure marketplace advantage.

[engineering@infotech-enterprises.com](mailto:engineering@infotech-enterprises.com)

### Global Headquarters

Infotech Enterprises  
Plot No.11 Software Units Layout  
Infocity, Madhapur  
Hyderabad - 500081, India  
Tel: +91 - 40 - 23110357 / 8  
Fax: +91 - 40 - 23110354

### Europe Headquarters

Infotech Enterprises  
Mollenbachstrasse 37,  
71229 Leonberg,  
Germany  
Tel: +49-7152-9452-0

### North America Headquarters

Infotech Enterprises  
330 Roberts Street, Suite 400  
East Hartford, CT  
USA 06108  
Tel:+1-860-528-5430

**Australia | Canada | France | Germany | India | Japan | Malaysia | Netherlands | New Zealand | Singapore | UAE | UK | USA**

© Copyright 2010, Infotech Enterprises. All rights reserved. Without prior written consent from Infotech Enterprises, no part of this document may be reproduced, stored in a retrieval system, transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or any other communication media. The information contained herein is subject to change without notice. Trademarks mentioned, if any, are the property of their respective owners.

[www.infotech-enterprises.com](http://www.infotech-enterprises.com)