



# Materials Processing Institute



**Partnership Programmes** - Enabling clients to place a portfolio of research and innovation projects under the management of the Institute.



The Materials Processing Institute offers research and innovation partnerships enabling clients to place a portfolio of projects under the management of the Institute.

### The portfolio approach:

- > **Maximises the financial return on research investment**
- > **Minimises the technology risk associated with the research**

Management of research portfolios is supported by programme management and technology portfolio management techniques, such as phase gate analysis, risk matrices and technology readiness level assessment.

This partnership approach is a long-term relationship based on mutual benefit. The Institute integrates with the client to deliver a programme of research and innovation projects, extending through to co-ordinating the complex innovation landscape, including:

- > **Management and implementation of client research programmes, including management of third party organisations, such as universities**
- > **Co-ordination of public funding and bid writing, including technology scanning and highlighting opportunities**
- > **Training of high level skills including supervision of PhDs**
- > **Intellectual property management**

### Roland Junck, Executive Chairman, British Steel

*"We are extremely proud of our partnership with the Materials Processing Institute and seeing their highly skilled team in operation gives me even greater optimism that we can not only continue to meet the needs of current customers, but of future ones as well."*



# FINANCIAL BENEFITS OF PARTNERSHIP PROGRAMMES

## Financial Return

Partnership Programmes operate with agreed key performance indicators. The following returns are typical:

- > Return on Investment of 8:1
- > Financial leverage of 1:2

## Return on Investment

By taking a structured approach to innovation management, a balanced research portfolio with a target rate of return can be achieved. This rate of return can be matched to the risk appetite of the client. Returns of 8:1 have been found to be historically achievable for a portfolio of moderate risk.

For most innovation projects, financial benefits are realised for more than one year, giving significant multiples on the original 8:1 return.

Sanjeev Gupta,  
Executive Chairman,  
Liberty House Group



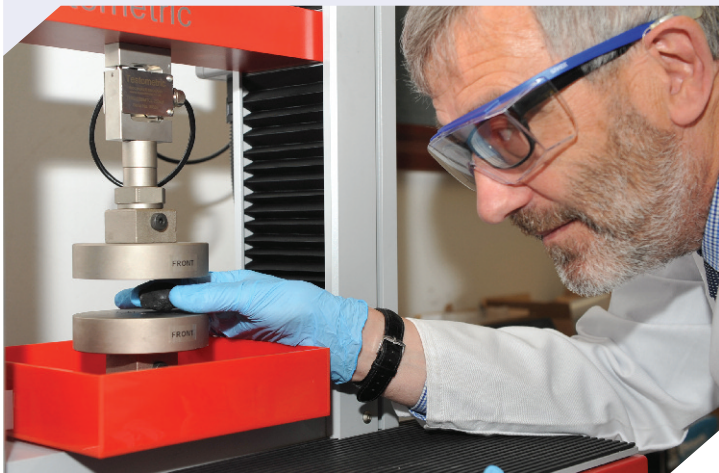
The Institute works with leading industrial companies such as Liberty House Group.

## CASE STUDY

### Raw materials improvement generates 20:1 return on investment

*An industrial partner wanted to reduce the cost of raw materials. The Institute implemented an investigation programme, which included characterisation of alternative raw materials, processing performance evaluation and value in use.*

*The Institute made recommendations to reduce operating costs and improve process efficiency, without the need for additional capital expenditure. The client estimated the benefit of this work to be more than twenty times the cost of the research programme.*



# WIDER BENEFITS OF PARTNERSHIP PROGRAMMES

## Leverage

The partnership programme offers the scope to source innovation funding from the public sector.

- > **The partnership gives the ability to respond quickly and flexibly to open project calls**
- > **The partnership enables the Institute to engage in calls at preferential rates not available to single companies. Up to 70% public funding intervention is available to the Institute, whereas large companies can be limited to intervention rates of 25% public funding**
- > **The entire process of call identification, consortium building and bid writing can be carried out by the Institute**

The underpinning commitment in a partnership programme is the key to securing funding leverage, allowing the Institute to move quickly to secure participation in funding calls.

## Developing People

The commitment from a client to establish a partnership programme, becomes a commitment from the Institute to develop a wider team of highly skilled technologists with an implicit understanding of the client's strategic and technology needs. This helps identify new technology opportunities and to deliver competitive advantage.

The Institute runs a bursary scheme with the Worshipful Company of Armourers and Brasiers, that allows students in the Institute's Doctoral Academy, to benefit from work placements, industry visits and other activities. Client partners can participate in this programme, either through hosting visits, or by nominating projects and students for the scheme.



### Garry Ingoldsby, Business Development Manager

*"By working closely with our partners we can actively match their business needs to research funding opportunities that we have identified and then use this to leverage their research investment. For our partner clients this is all part of the service."*



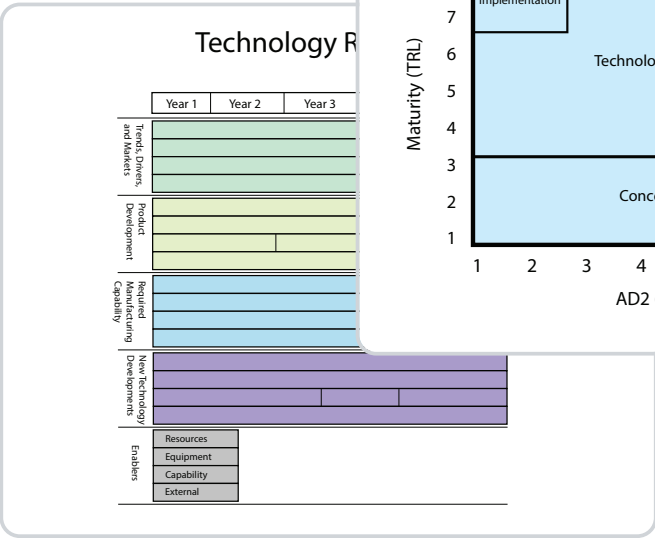
# RISK MANAGEMENT BENEFITS OF PARTNERSHIP PROGRAMMES

## Risk Management

The partnership arrangement results in a diversified portfolio of research projects. The technology risk associated with an individual project is mitigated by pooling risk and uncertainty across a balanced programme. This reduces the need for excessive contingency associated with single projects. Constant assessment and reallocation of resources within a portfolio leads to the most efficient outcome in terms of best value delivery.

With technology risk being shared across several projects the programme can respond to the needs of each project. Advanced technology management tools, such as phase gate analysis, are used to create and manage a technology portfolio in line with the risk appetite and needs of each client.

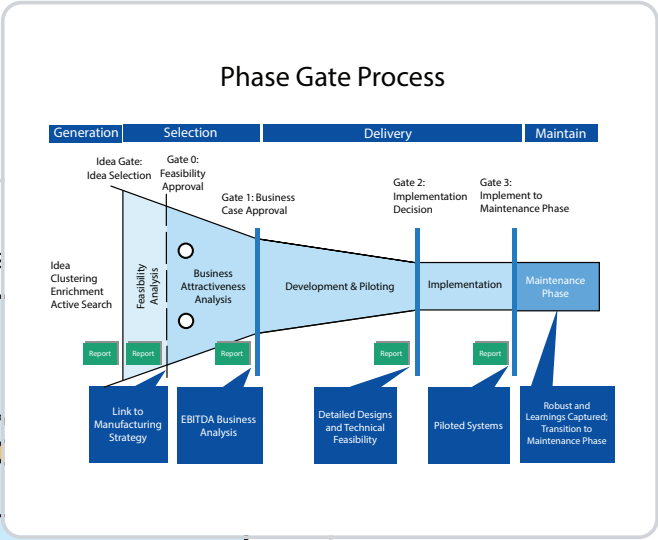
Individual projects can be rapidly started and stopped, in response to the changing needs of businesses, operating in dynamic trading environments.



## Portfolio Management Tools

Use is made of portfolio management tools to:

- > Create a balanced portfolio of research and innovation projects aligned to company strategy
- > Select projects to create a balanced portfolio considering technology readiness, degree of difficulty and cost of delivery, to achieve an overall target rate of return
- > Use of a project management tools to minimise project risk and increase the success rate
- > Integrate the resource plans of different projects to maximise the efficiencies and optimise project delivery times



# MANAGEMENT OF PARTNERSHIP PROGRAMMES

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## Strategic Account Management

The Institute allocates a Strategic Account Manager with a background in both industrial research and industry to deliver the research programme. The Strategic Account Manager works alongside the Institute's researchers and engineers, monitoring the programme and balancing priorities; as well as identifying new technology opportunities that will improve business performance for the client.

### Tony Parkinson, Strategic Account Manager

*"I have a great deal of experience in the metallurgy sector and component supply chains, which serves the Materials Processing Institute and our clients well, as we implement research programmes tailored to each of our clients' specific requirements and build on our own innovative research."*



## Case Study – Identifying Advanced Technology Based SMEs

Through its SME Technology Centre, the Institute works with over 100 supply chain SMEs per year. Client partners have an advantage in gaining early insight into those technologies of interest for investment, or acquisition.



### Paul Taylor – Programme Manager, SME Technology Centre

*"I work with our client partners to identify those SMEs in their supply chain that are crucial to their strategic development and as an Institute we support those companies to be better and more effective suppliers, giving a competitive advantage to our partners."*

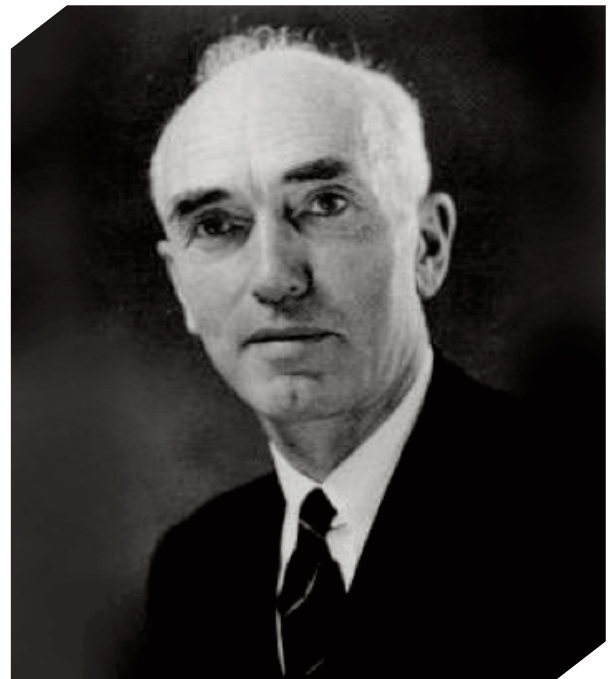
## TRACK RECORD OF DELIVERY

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The Materials Processing Institute has been delivering complex, multi-partner research and innovation programmes for over 70 years and has been the leading organisation in managing the process of bringing innovation to commercialisation.

### Technology Readiness Levels

Starting life as the British Iron and Steel Research Association (BISRA) in 1944, the Institute quickly established a leading reputation for technology commercialisation and led the world in technology management. Technology readiness levels, now the standard means of assessing technology risk, were first developed by the Institute's founding Director, Sir Charles Goodeve in 1962. Sir Charles identified the three stages of development of technology, through fundamental research, research associations and industrial laboratories. These classifications map to the nine-point scale of technology readiness levels conceived by NASA in 1974 and are now standard throughout industry and academia in the management of technology and innovation projects.



*Sir Charles Goodeve in 1962*



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