

# PPM 4 EVERYDAY USE

(project, programme, portfolio project  
management for everywhere use)

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# OBJECTIVES



- **Remain in contact with all of you**
- **Inspire at least one person to set his goals and achieve his/her dreams**
- **Present frameworks on:**
  - Business Analysis,**
  - Project Management,**
  - Programme Management,**
  - Portfolio Project Management**
- **Touch upon some of the transferable skills from science to business**

“If you do not know where you are going, any path is as good as another.. but you will not realize you are lost, you will not know what time you will get there, you might unknowingly be going in circles, and others will not understand how they can help. And, since you could pass right without knowing it, you will not get the satisfaction of having arrived.” Lewis Carroll: Alice in Wonderland.

# A PROJECT MANAGEMENT FRAMEWORK

# Explore

# Innovate

# Navigate

## Execute

- As is situation
- What (have to be achieved)?
- Why?

- Approaches
- The whole new ways to go from A to B

Choose between different paths based on:  
constraints, values, risks while having end goal in mind

- Plan
- Execute
- Feedback (loop)

## Empathize\*, Respect & Feedback



There are various project management methodologies and certifications ; Prince2, PMP, APM.

\*See the acknowledgement slide: point 4



# EXPLORE FRAMEWORK (BUSINESS ANALYSIS)

What?  
(needs to be  
achieved)

Why?  
(benefits)

Who?  
(stakeholders)

Problem  
Structure

Where?  
(we are)

Challenges &  
Risks

Criteria of  
Success

Monitoring

Communication

Initial Plan &  
Outstanding  
Issues



The more effort, not necessarily more time, spent in the explore phase the lower the uncertainty in the project and the lower the costs of surprises at a later stage(s) of the project.

Explore phase in the most important phase of the project lifecycle.

# WHAT IS PROGRAMME MANAGEMENT



- Multiple projects
- Related
- Synergies
- Benefits

PMI (Project Management Institute) definition:

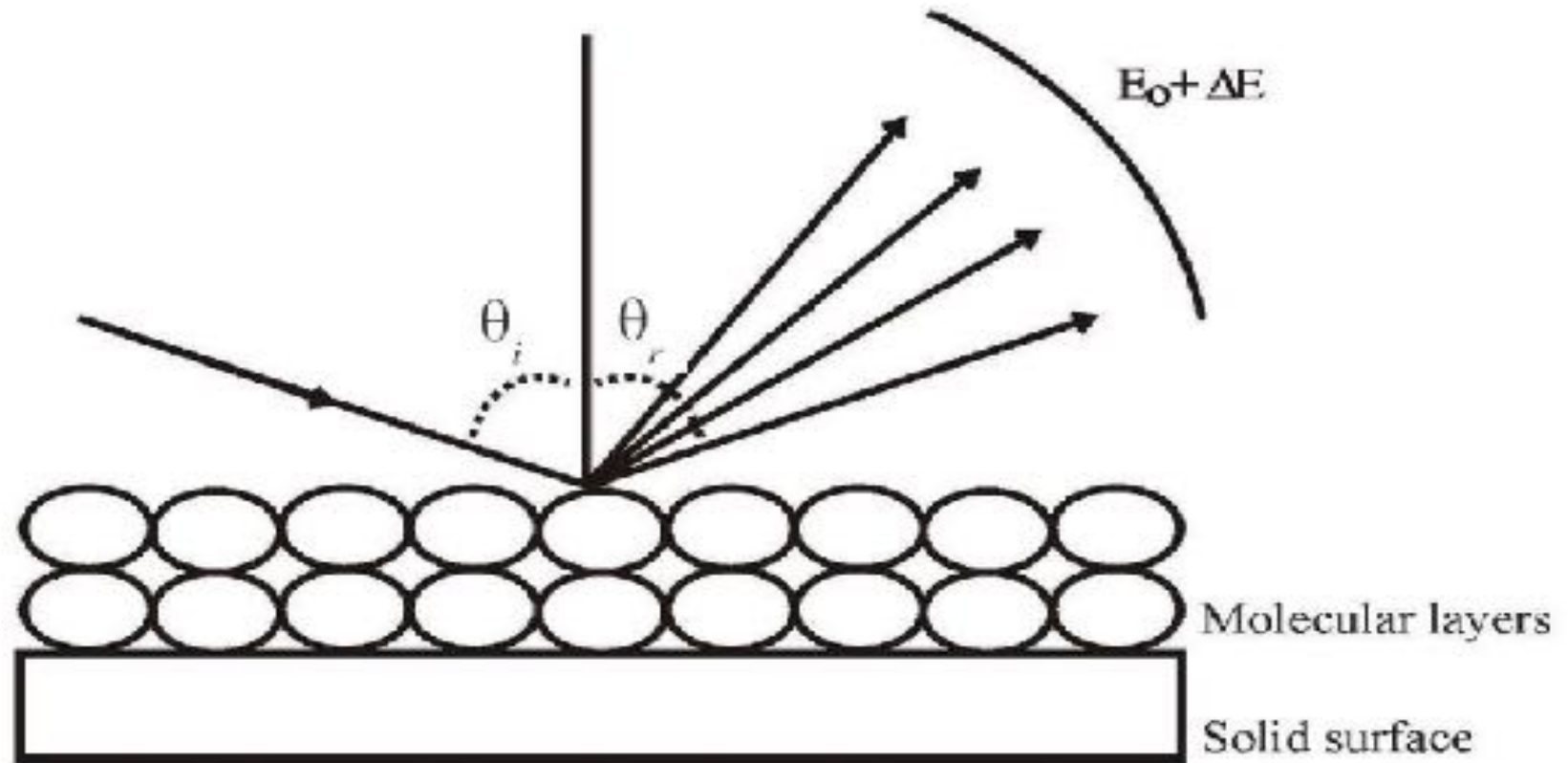
A group of related projects managed in a coordinated way to obtain benefits and control not available from managing the projects individually.

# PROGRAMME MANAGEMENT

- Interactive open discussions
- Exchange ideas & knowledge on:  
programme management  
in football in Egypt

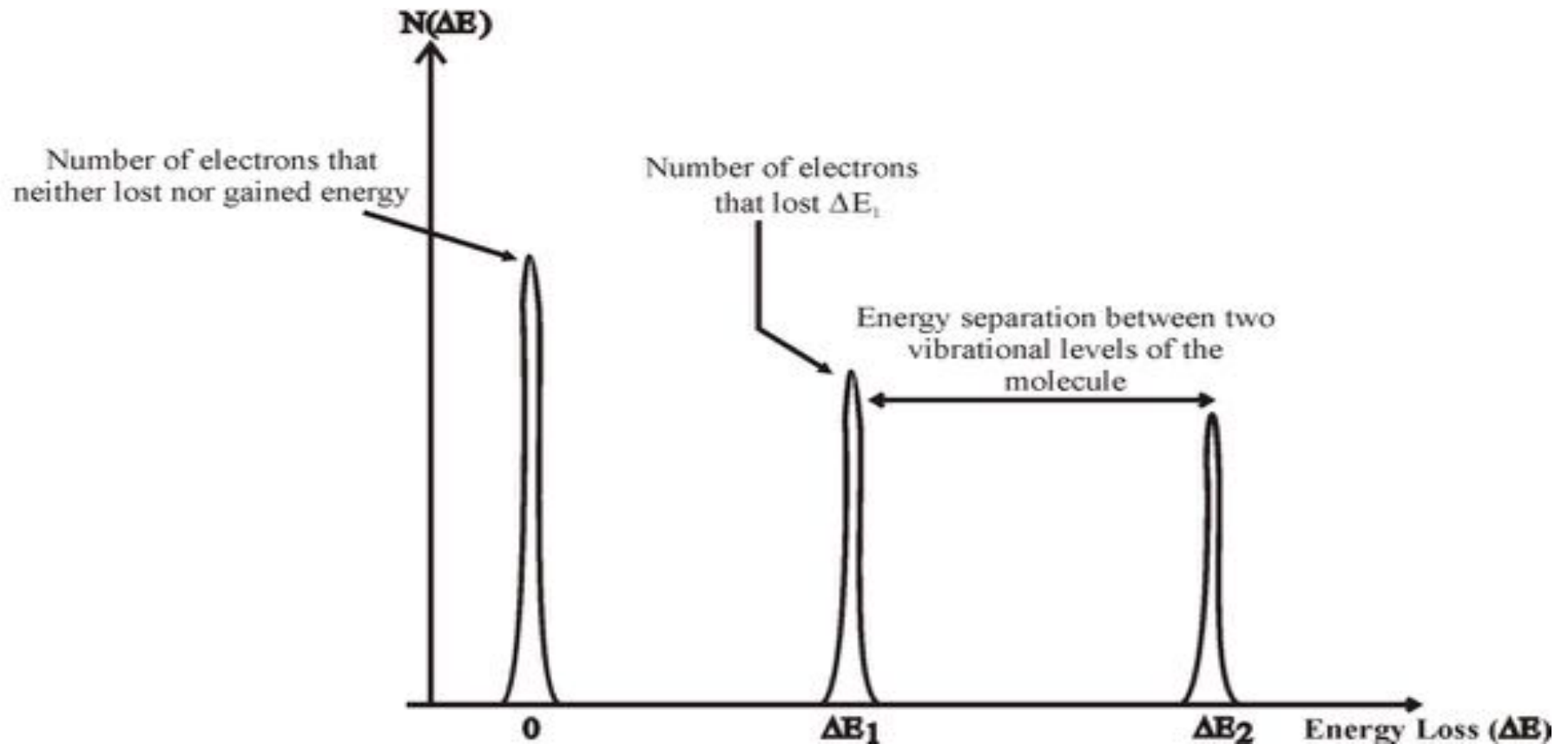
Possible building blocks;  
Security, Facilities, Culture and Change Management,  
Marketing, Training, Team Selection, .....

# MOLECULAR SCATTERING



The basic idea of the Electron Scattering. The small percentage of the in-elastically scattered electrons demonstrates the difficulty of performing the Electron Scattering experiments on the surface.

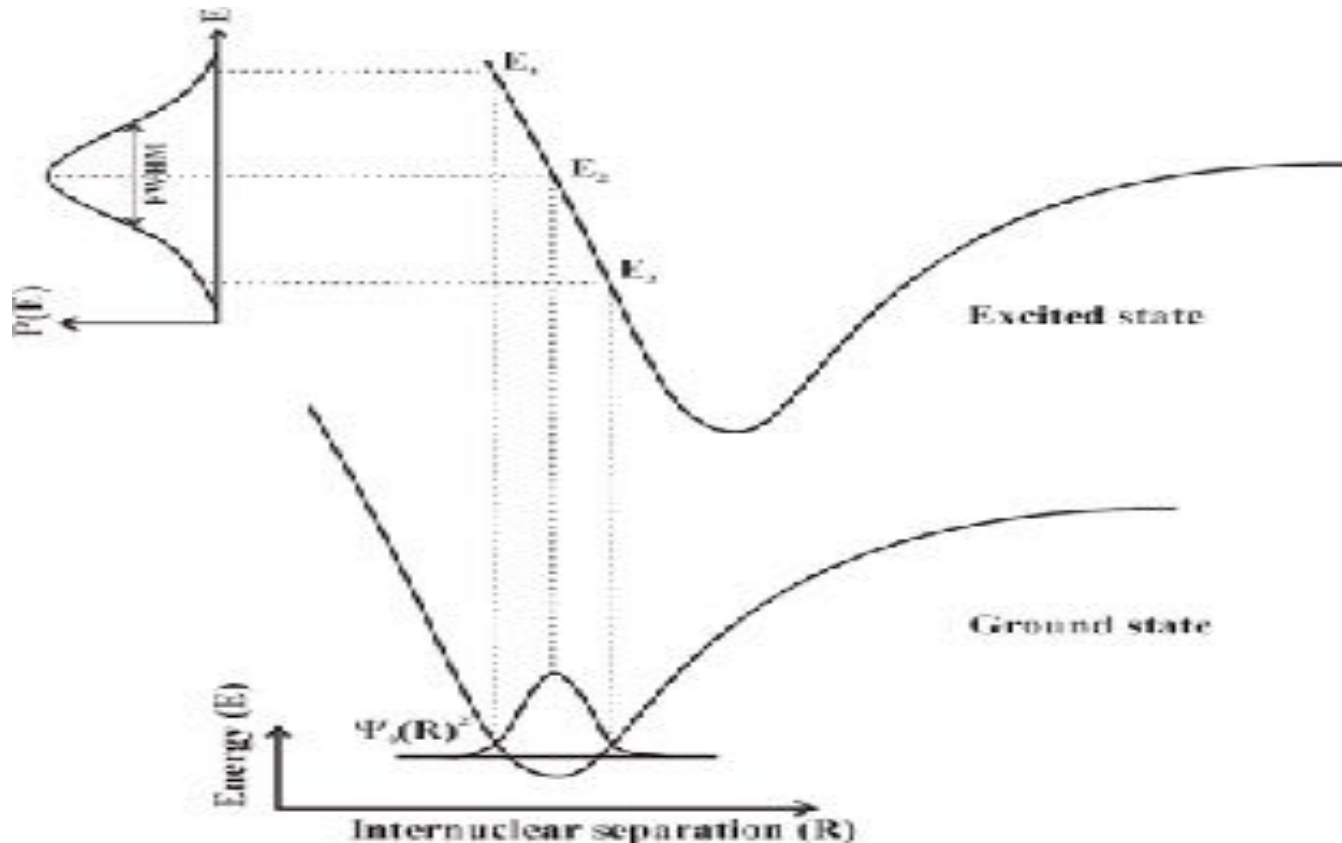
# ELECTRON SCATTERING



The Electron Energy Loss data can be recorded as a plot of the total number of electrons against their scattered energy.

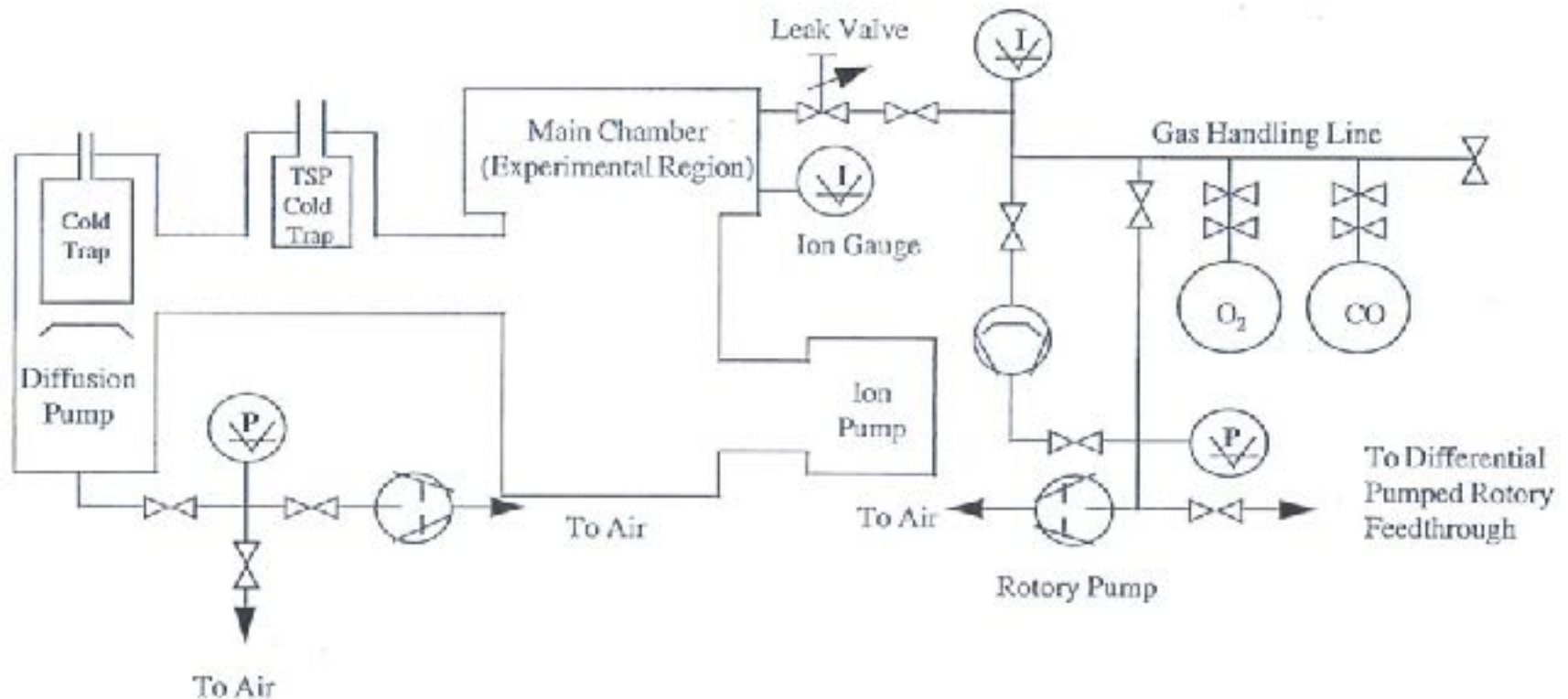


# RESONANCE PEAK



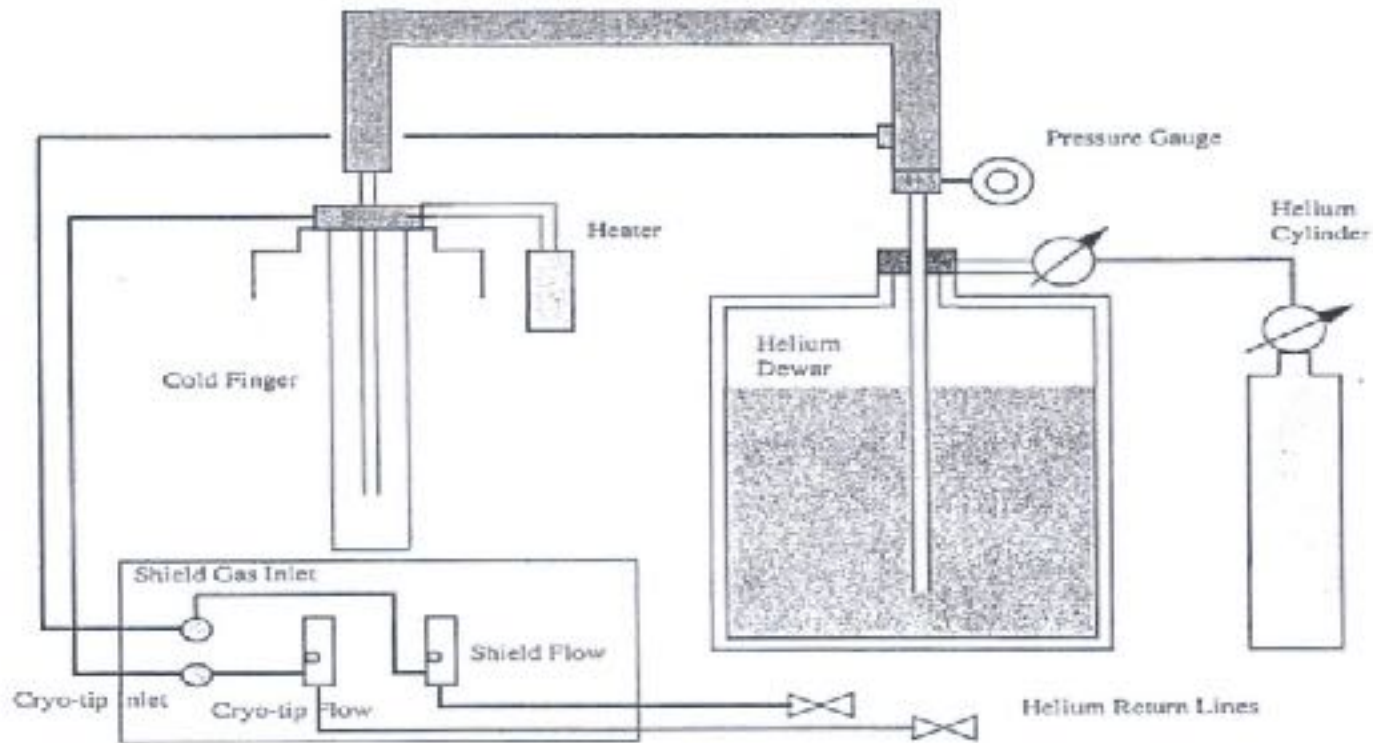
The Electron Energy Loss data can be recorded as a plot of the total number of electrons against their scattered energy.

# EXPERIMENTAL APPARATUS-IMPORTANCE OF RISK MANAGEMENT



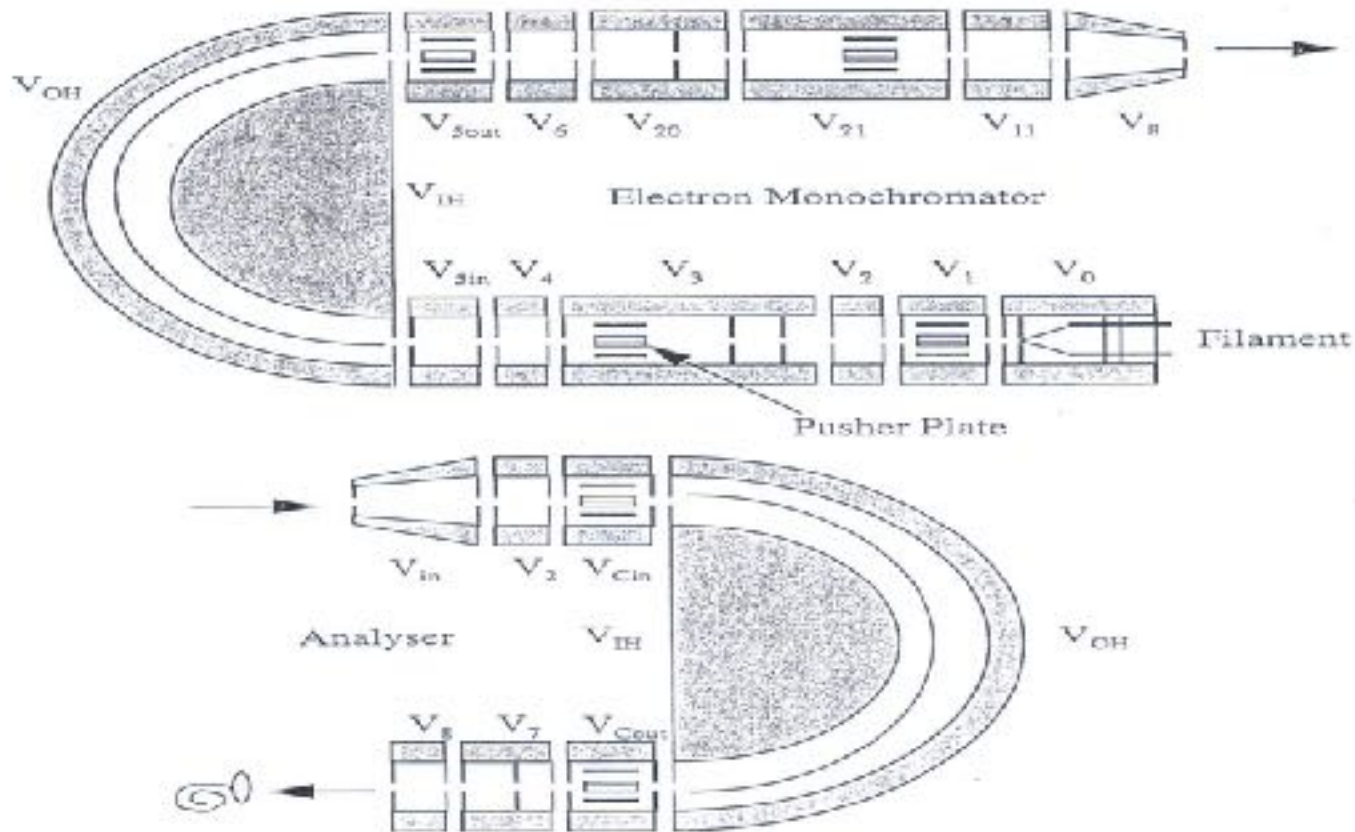
The vacuum system. To manage complexity the problem has to be broken down to its main building blocks. To maintain the management of complexity only the most important elements of the building blocks have to be monitored.

# EXPERIMENTAL APPARATUS-IMPORTANCE OF RISK MANAGEMENT



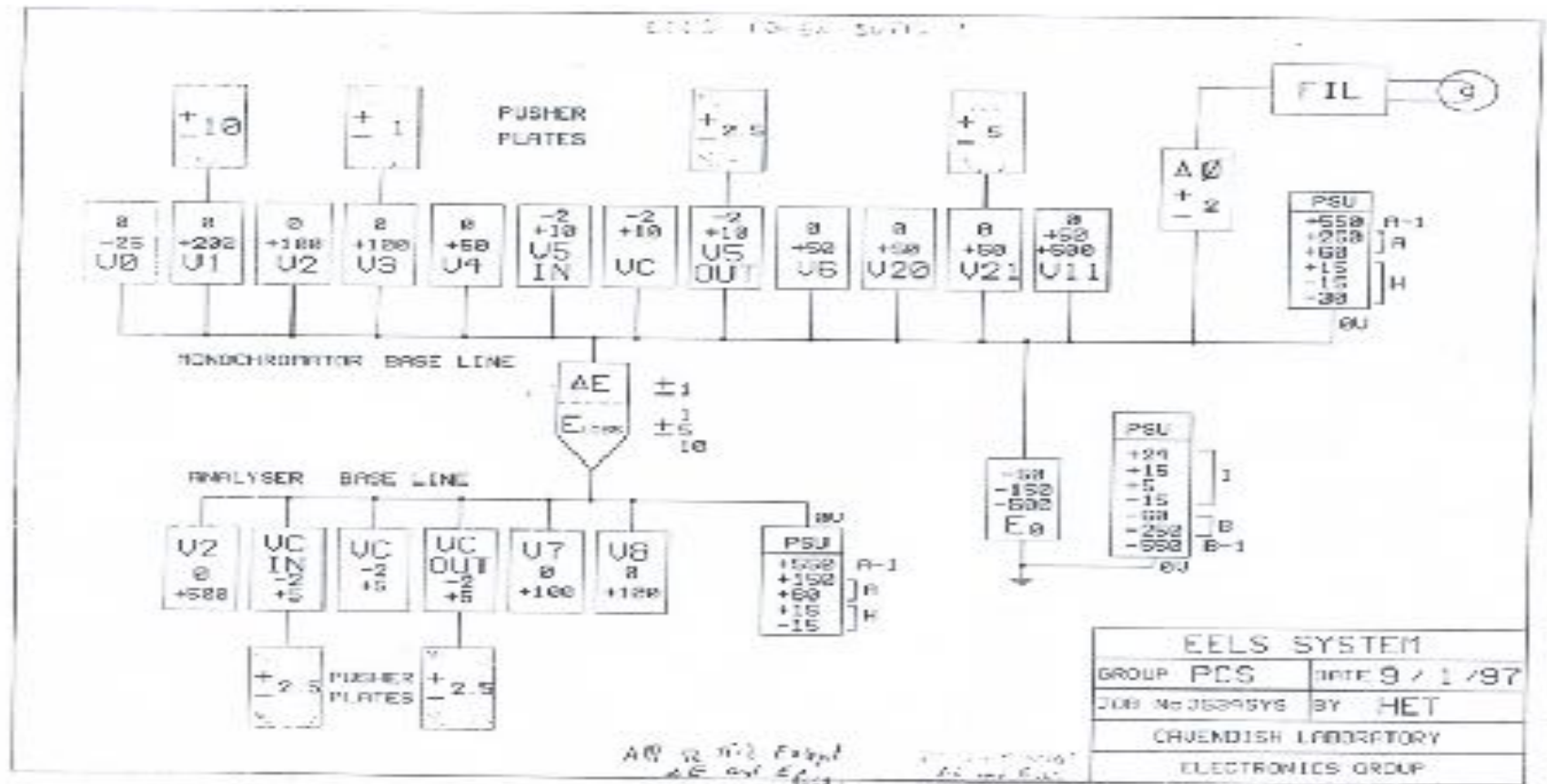
The liquid helium system as electrons were scattered from molecules on a graphite substrate cooled down to about 23 Kelvin.

# EXPERIMENTAL APPARATUS



Electron Spectrometer. The optimization process of tens of electrostatic lenses is quite complex process with two ultimate goals in mind: a high intensity and very narrow electron beam.

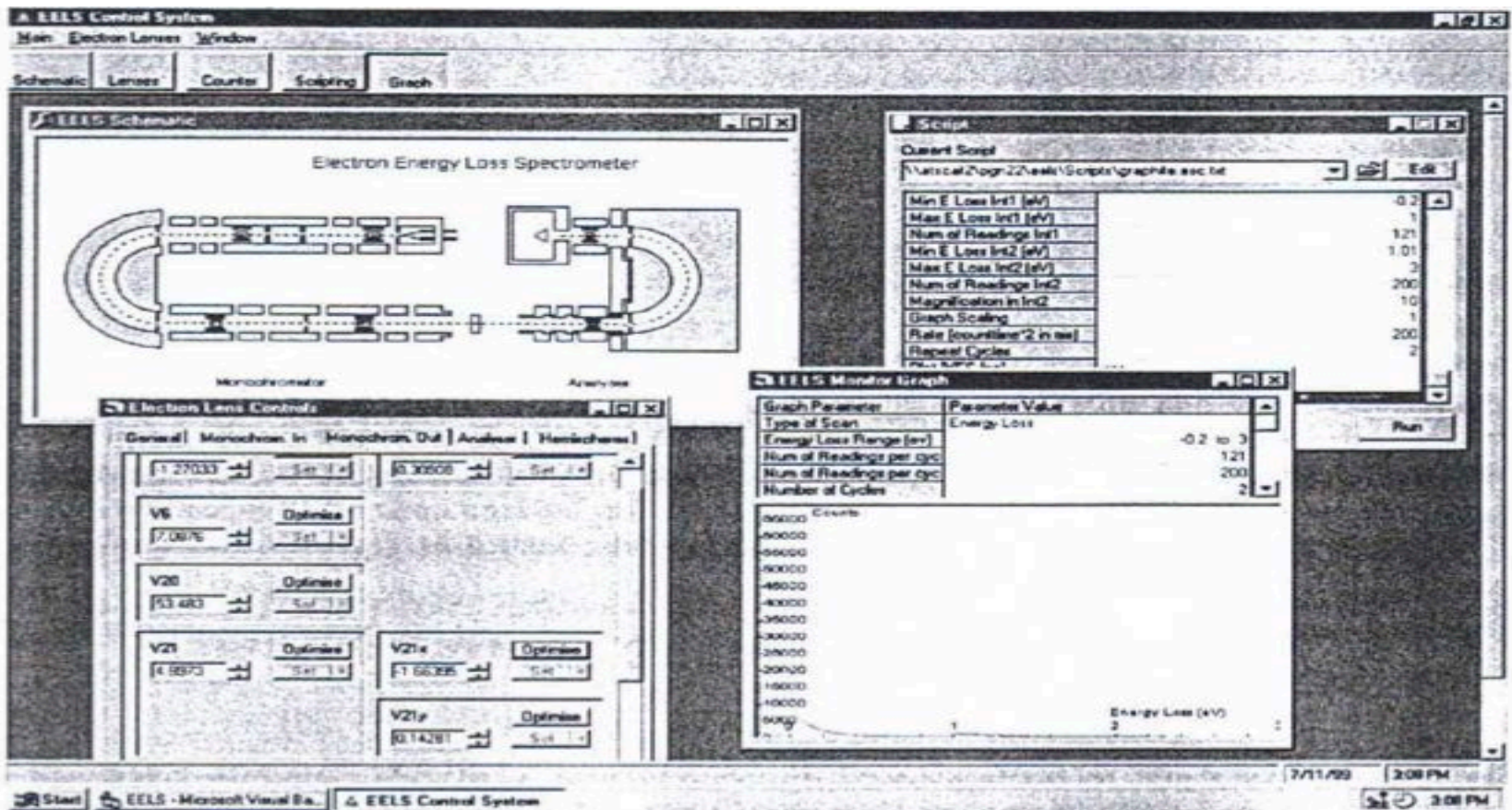
## EXPERIMENTAL APPARATUS



Power supply. Each electrostatic lens has on average an energy range of 0-50 Volt, which makes it a very sophisticated multi-dimensional optimization.

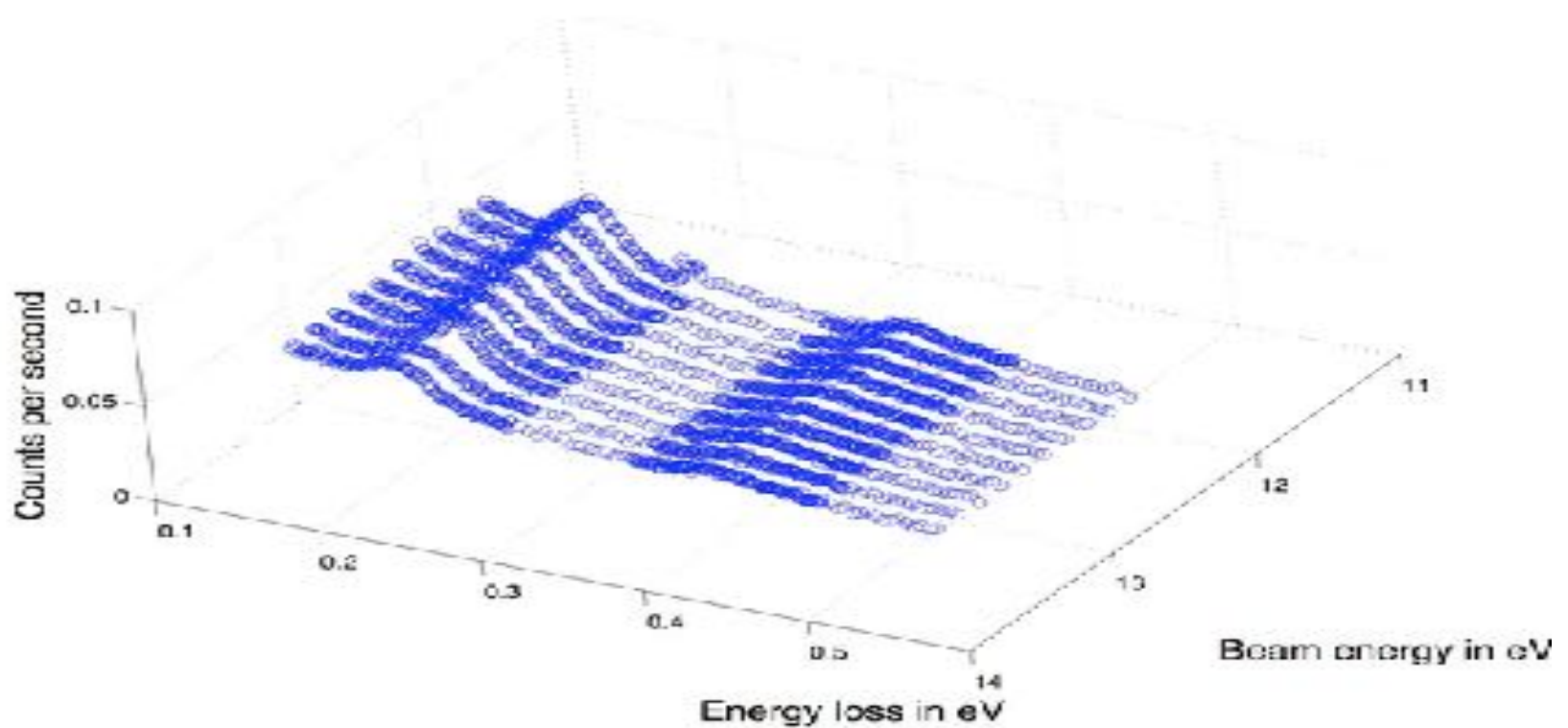


# EXPERIMENTAL APPARATUS



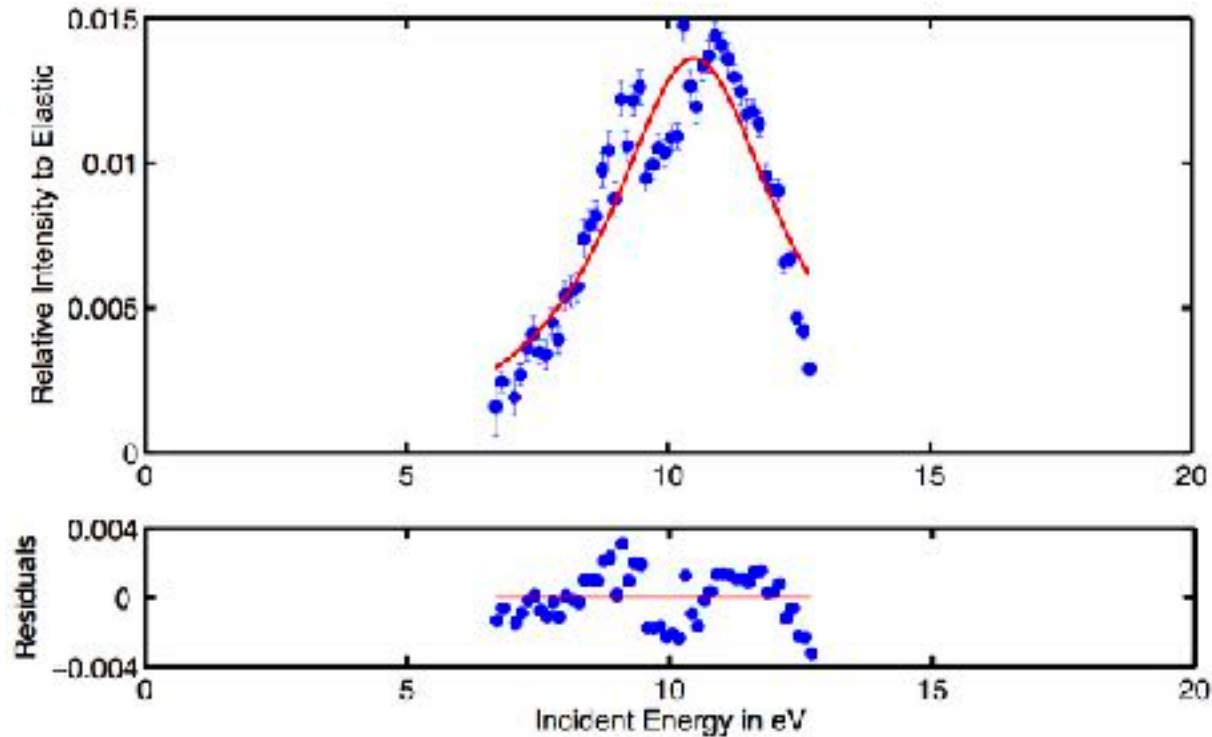
Screen shot of computer interface. Technology is a crucial element in discoveries but how to utilize it is as important as the technology itself.

# EXPERIMENTAL BREAKTHROUGH



Instead of 2 or 3 electron loss scans within 1 eV, it was possible to take about 10 electron loss scans in the same time.

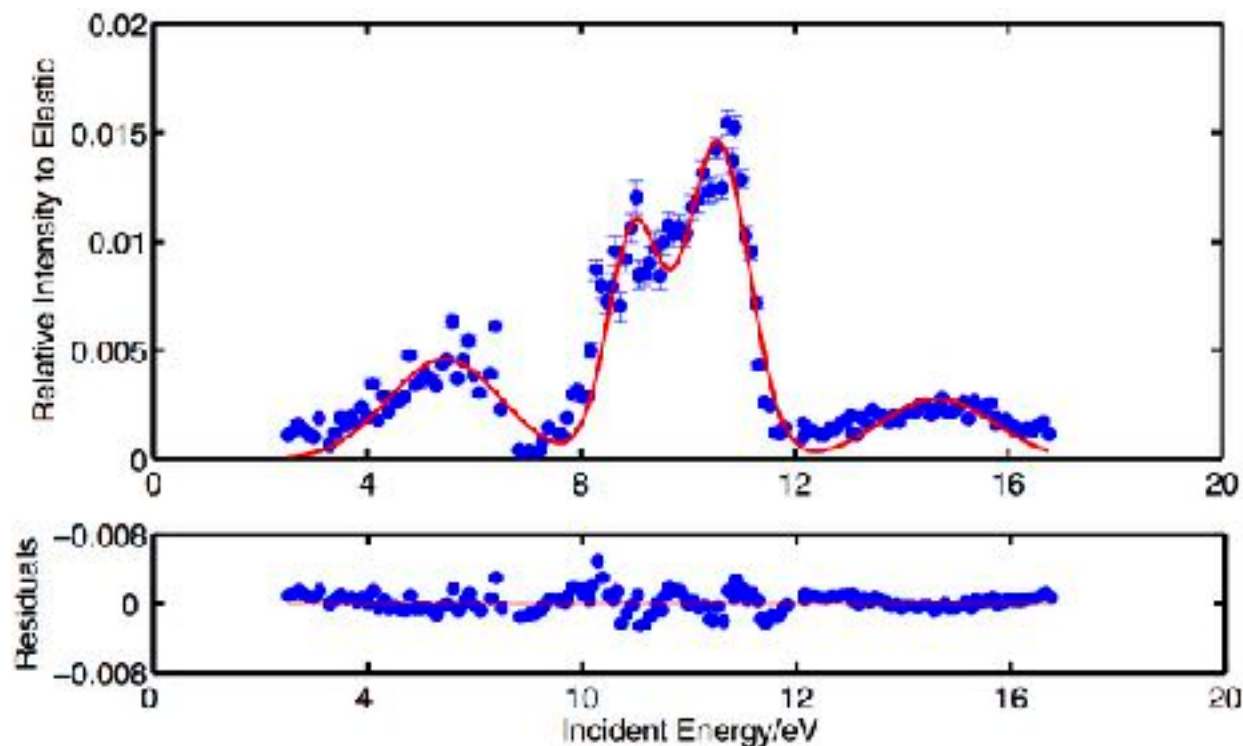
# EMERGENT PROGRAMMES-IMPORTANCE OF OBSERVATION



Electron scattering experiment from Oxygen molecules in the energy range between 5-12 eV.

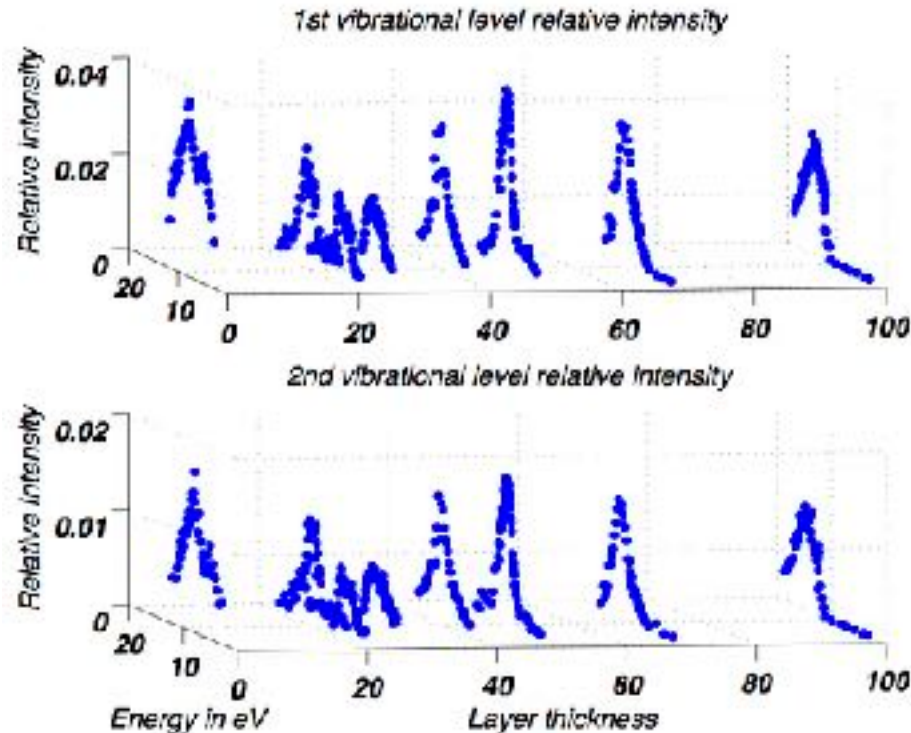


# EMERGENT PROGRAMMES-LET US EXTEND THE SCOPE



Electron scattering experiment from Oxygen molecules in an extended energy range around 2-18 eV.

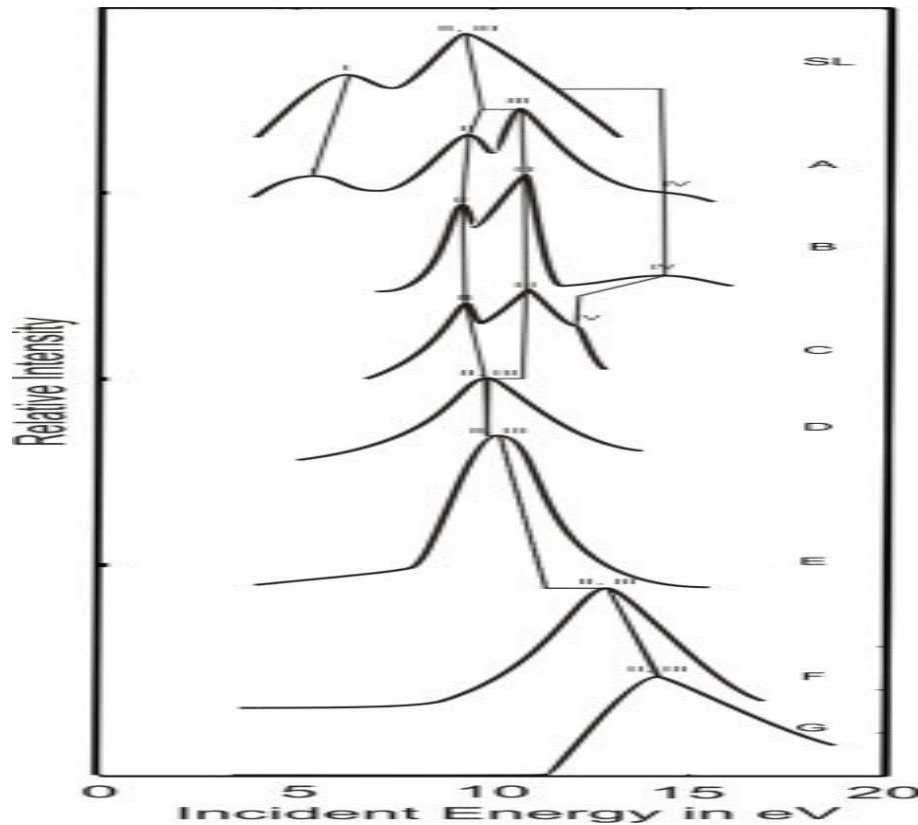
# EMERGENT PROGRAMMES-LET US CONTINUE TO EXTEND THE SCOPE



Effect of layer thickness on the resonance peak(s)/scattering cross section.

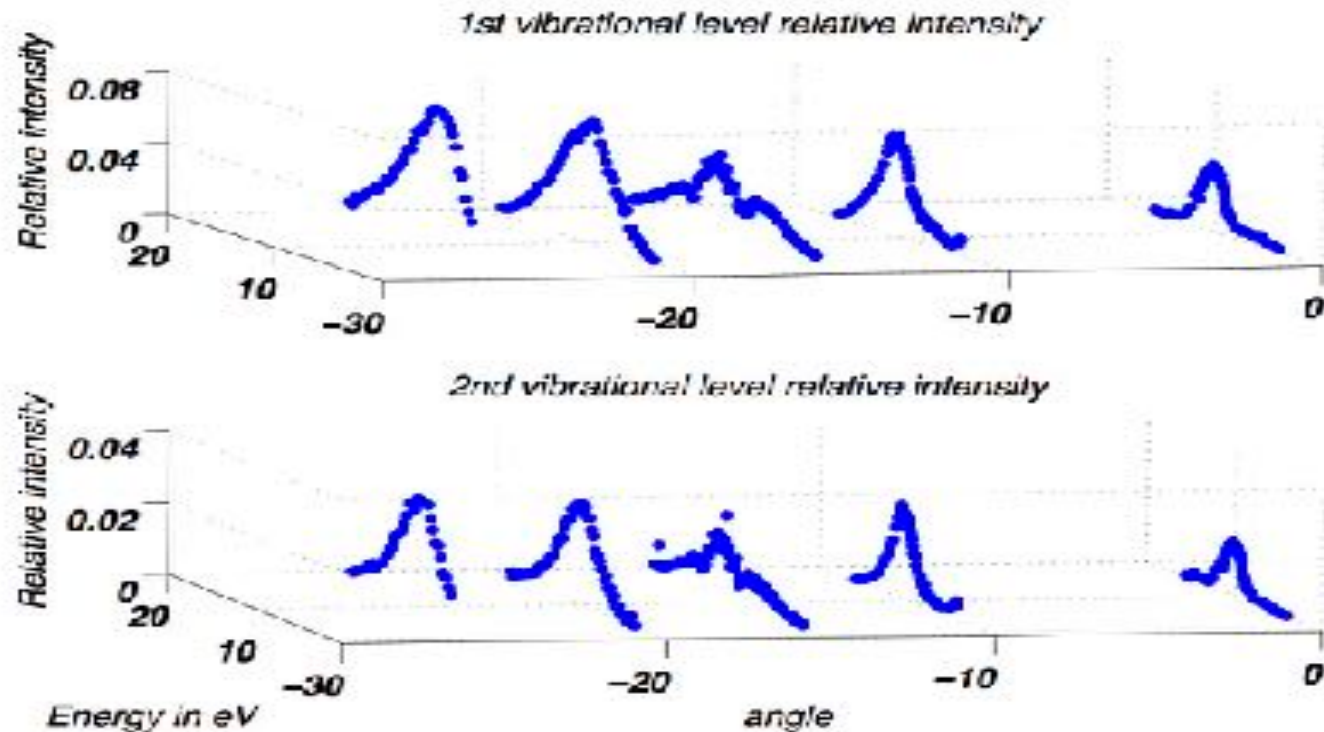
First study using electron energy loss spectroscopy from multilayers of diatomic molecules (Oxygen).

# EMERGENT PROGRAMMES-LET US CONTINUE TO EXTEND THE SCOPE



Effect of layer thickness on the resonance peak(s)/scattering cross section. Schematic diagram.

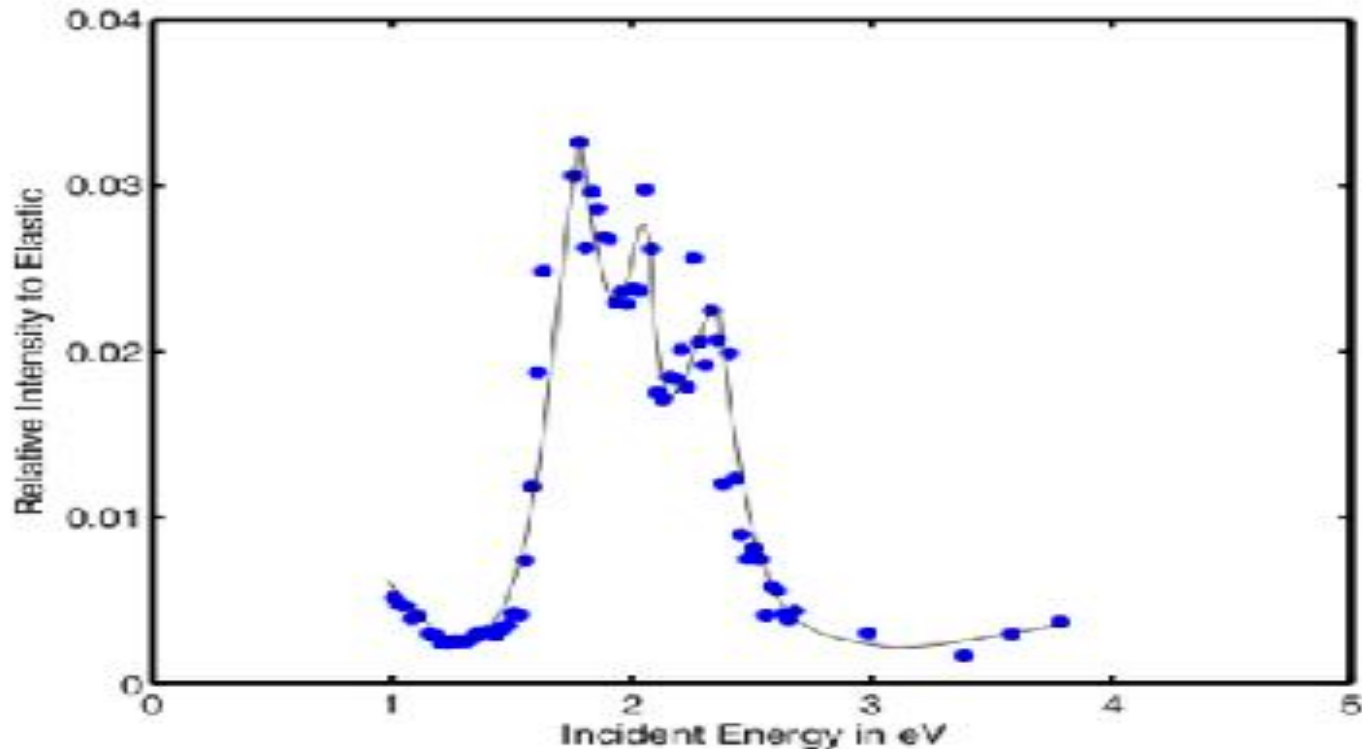
# EMERGENT PROGRAMMES-LET US CONTINUE TO EXTEND THE SCOPE



Effect of angle of observation on the resonance peak(s)/scattering cross section.

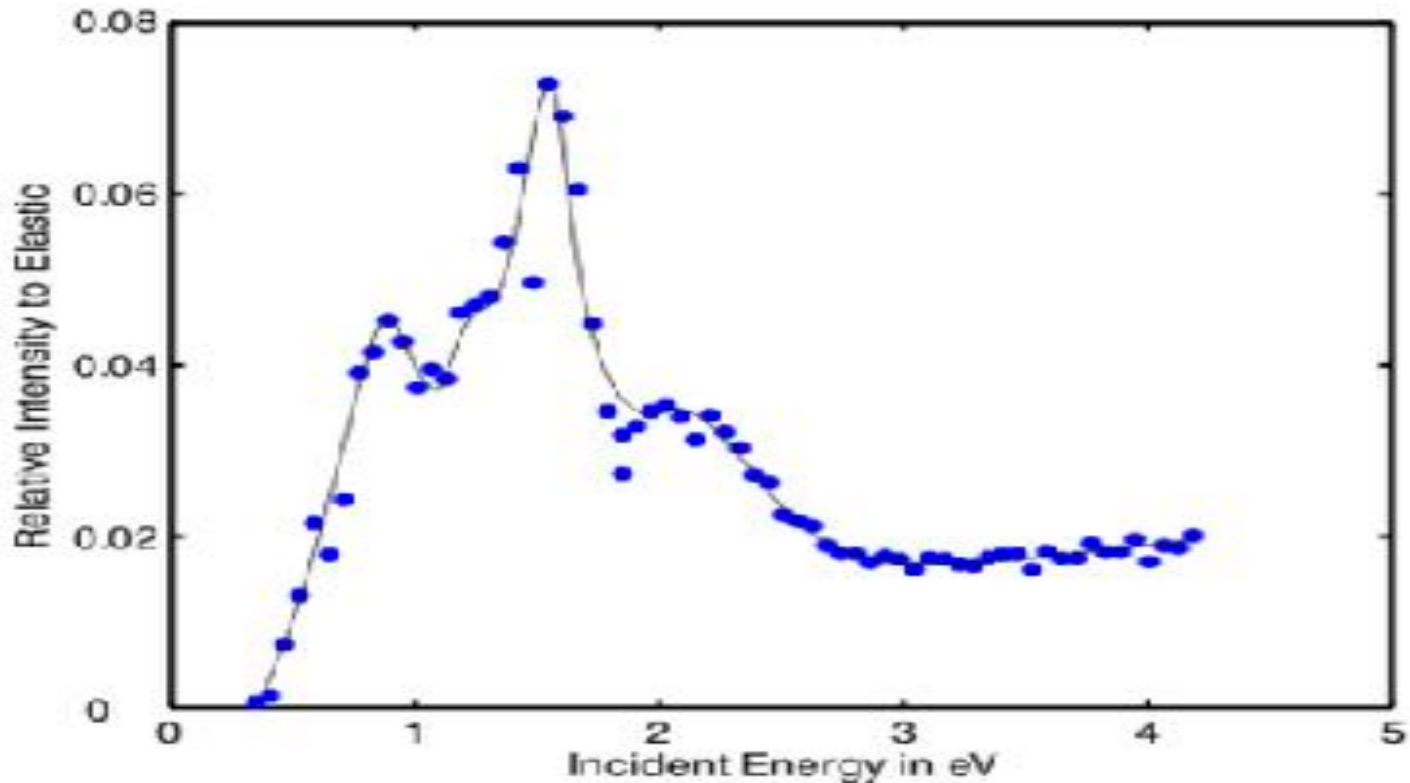
First study using electron energy loss spectroscopy from multilayers of diatomic molecules (Oxygen).

# EMERGENT PROGRAMMES-LET US SEARCH FOR SYNERGIES



Electron scattering experiment from Nitrogen molecules in the energy range around 1-4 eV.

# EMERGENT PROGRAMMES-LET US SEARCH FOR MORE SYNERGIES



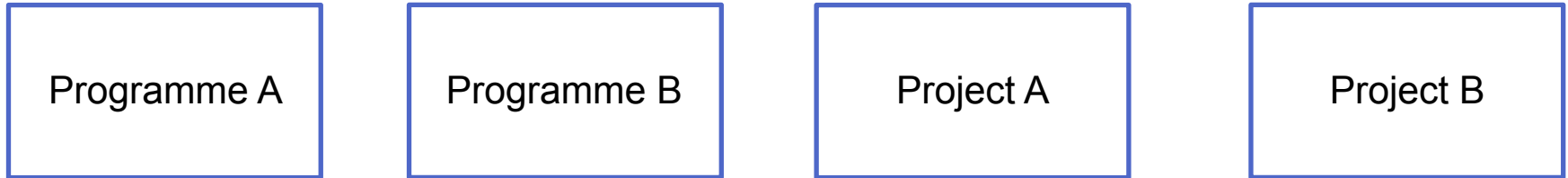
Electron scattering experiment from Carbon monoxide molecules in the energy range around 1-4 eV.

# SCIENTIFIC EMERGENT PROGRAMME (Oxygen, Nitrogen, Carbon Monoxide)

- Multiple projects: YES
- Related: YES
- Synergies: YES
- Benefits; Typical benefits of physics research

Experiments are done to verify existing theories and new experiments pushes for new theories to explain them.  
Biggest winners & beneficiaries: real world diverse practical applications.

# PORTFOLIO PROJECT MANAGEMENT



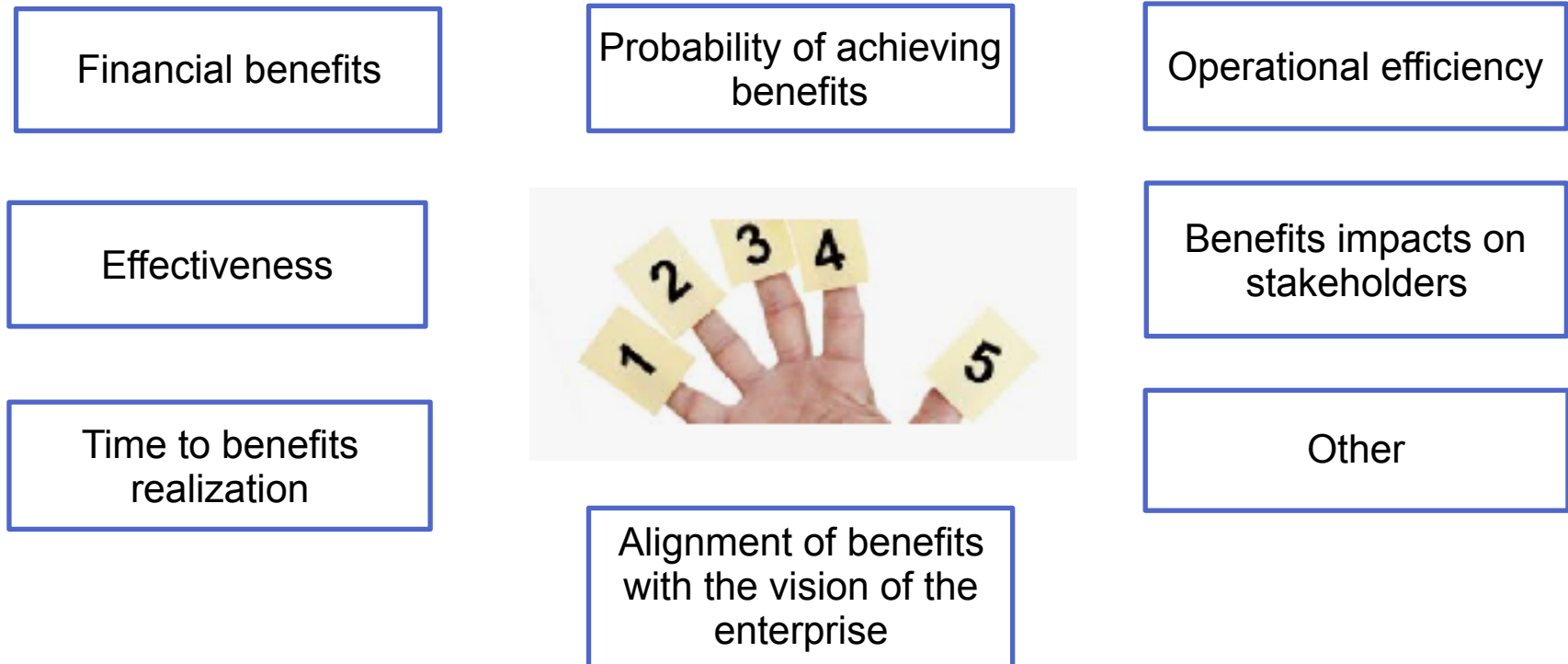
- Collection of projects and programme
- Mainly about prioritization & selection
- Also about the right balance

So far we have covered scientific skills that qualifies to become business analysts, project managers, programme managers, risk managers, data analysts and portfolio project manager.

All are well established disciplines outside the academic/scientific world.



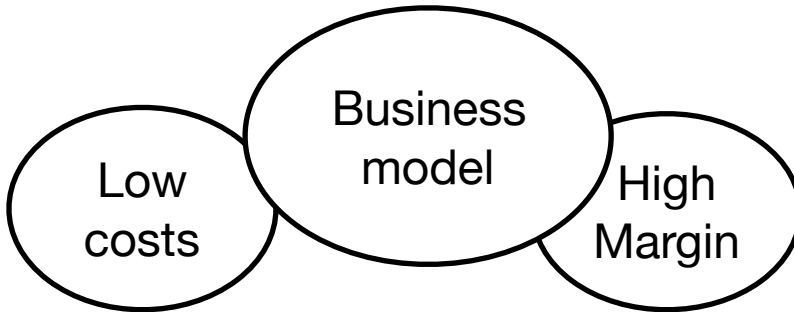
## PORTFOLIO PROJECT MANAGEMENT-PRIORITIZATION FRAMEWORK



It is a collaborative effort to decide on the criteria of selection. It can vary from enterprise to enterprise. Having a common debate among stakeholders is immensely useful.

The above criteria was mainly around benefit realization.

# PORTFOLIO PROJECT MANAGEMENT BALANCING

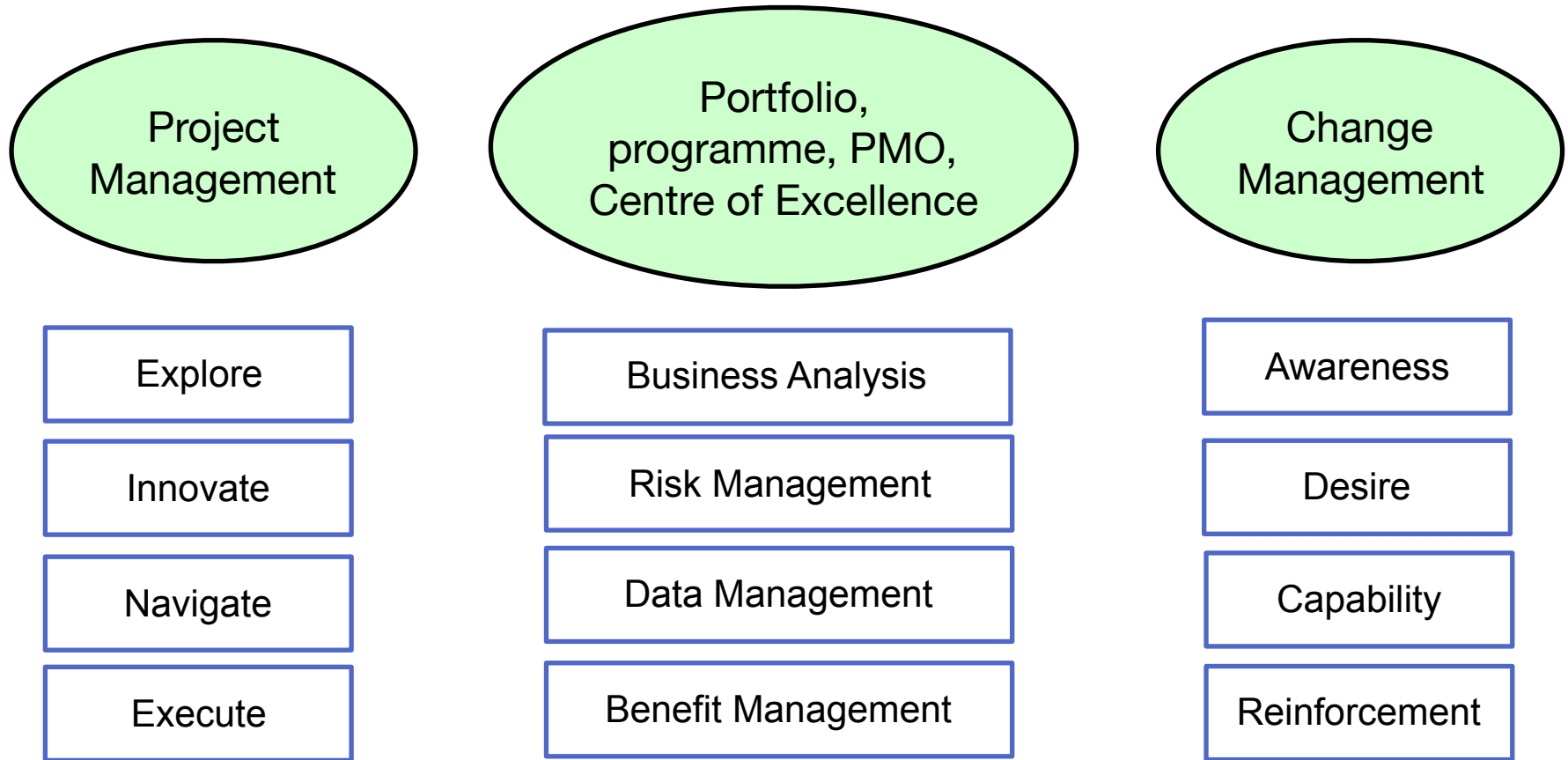


- Operations improvement
- Innovation (products, services, business model)
- Mandatory (regulatory, continuity)
- Other



Balancing the portfolio should match the strategic vision and the business model of the enterprise.

# PPM CONSOLIDATION - THE PEOPLE SIDE



Those are the essential components of successful management. Scientific research is extremely challenging. No single business discipline can match the scientific challenge. However, the challenge in business comes from managing these interacting elements and most of all managing the human behaviour.

# SUCCESSFUL MANAGEMENT

Vision

Skills

Incentives

Resources

Action Plan

Otherwise



Confusion

Anxiety

Resistance

Frustration

Treadmill

If there is confusion because there is lack of vision. If there is anxiety because we missing the right skills. Lack of resources lead to frustration and without a clear plan the team will keep going in circles. Incentives and ethics are the basis for people management otherwise resistance will eat everything for breakfast.

\* Courtesy of a LinkedIn Blog

# SUCCESSFUL MANAGEMENT LEADERSHIP PYRAMID



Competence is not only about knowledge. It is more about; decision making, integrating all efforts, ideas and opinions, identifying and developing talents and the ability to lead change projects and programmes.

If imagination is more important than knowledge, then ethics is more important than competence. Everything starts from learning though, so let us keep learning.

# ACKNOWLEDGEMENT

1. Skill you up team: colleagues, organizers (Sophie) and lectures (Ben, Werner)
2. My previous employer Enovos S. A. in Luxembourg
3. Positive Intelligence by Shirzad Chamine
4. APMG: MSP & Prince 2
5. CMC - ADKAR Change Management Framework
6. University of St. Gallen – Sketching at Work, Prof. Martin Eppler
7. Benefit Realisation Management, Gerald Bradley
8. Dr. Bill Allison, Cavendish Laboratory, Cambridge University

# CONCLUSION

- Set your objectives
- Understand your strength & weaknesses
- Compete positively
- Success = competence + ethics + continuous learning
- Most important ethics: maintain empathy and good nature with you in every step
- We all need “El Tawfiq/luck” without which none of us can move forward

# APPENDIX1

## STAKEHOLDERS & OBJECTIVES

Stakeholder Group	Business Unit (s)	Suppliers	Regulatory Bodies
Initial Objectives			
To increase ...			
To reduce ....			
To leverage ...			

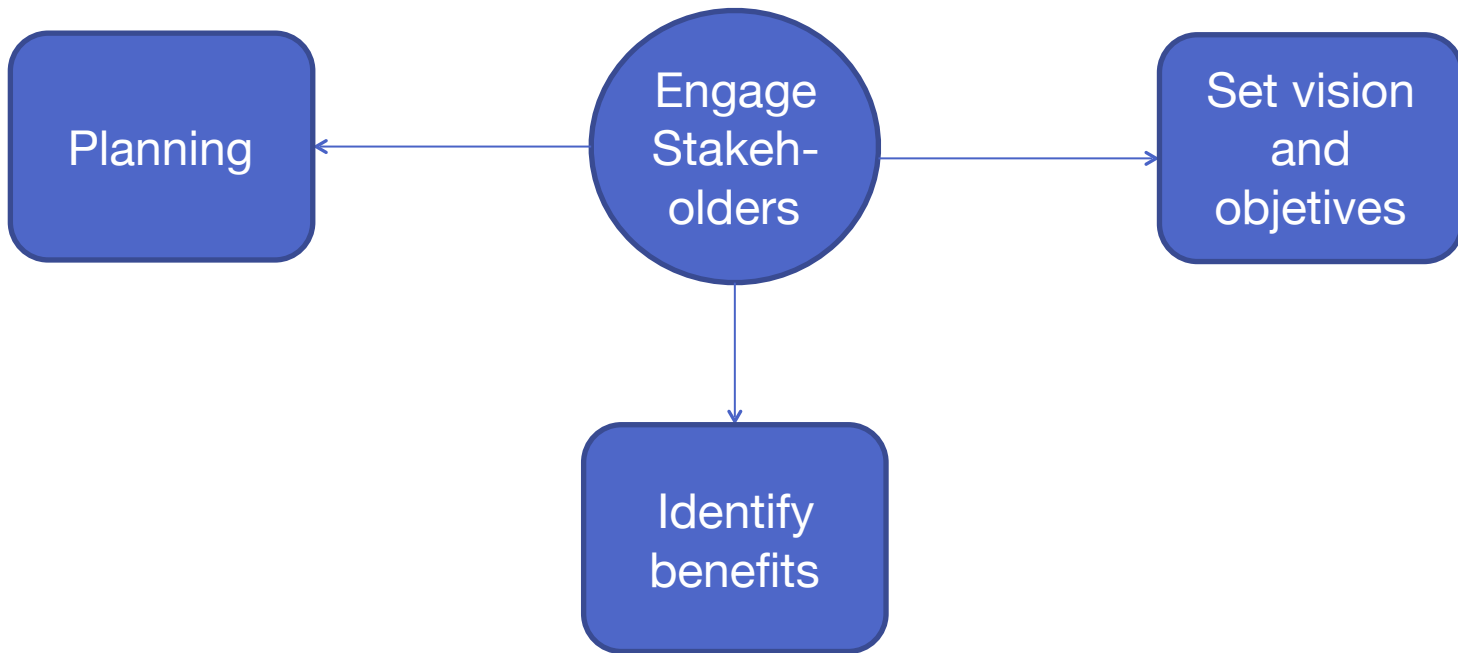
Defining stakeholders can be one of the easiest tasks yet one of the most important tasks. Objectives can be defined (via workshops) at first then workshops to define stakeholders or stakeholders' definition workshops are held first for initial information gathering then sessions on objectives.

Most importantly is to extend the circle of stakeholders and to make it inclusive, so none is missed and ensure all of the stakeholders aware of the objectives all the time



# APPENDIX 1

## STAKEHOLDERS ENGAGEMENT



Stakeholders should be engaged at all stages. However, the initial stages are the most important stages to engage and include as many (relevant) stakeholders as possible. Answering the questions: What? Why? How? With all stakeholders involved will make the later stages of the transformation such as managing the transformation, managing changes and managing performance much easier.

# APPENDIX 1

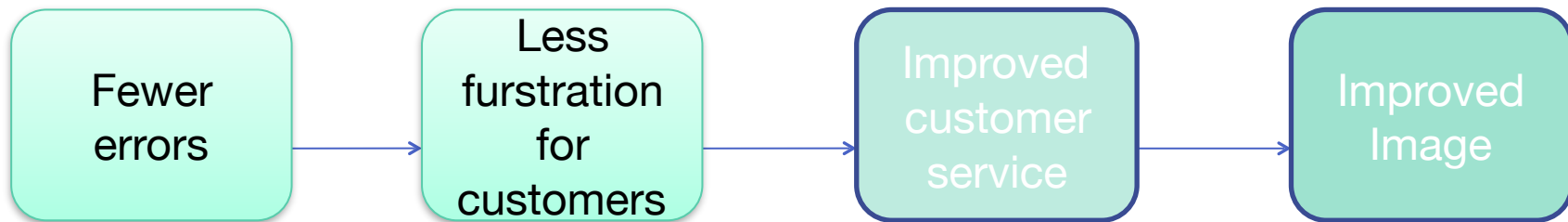
## STAKEHOLDERS ANALYSIS

Influence				
	High	Head of ...	Regulators	CEO
	Medium		Trade Unions	
	Low			
		Negative	Neutral	Positive
Attitude				

Change Managers should be in charge of the stakeholders analysis as it could be a highly political exercise. It is quite important for transparency.

## APPENDIX 2

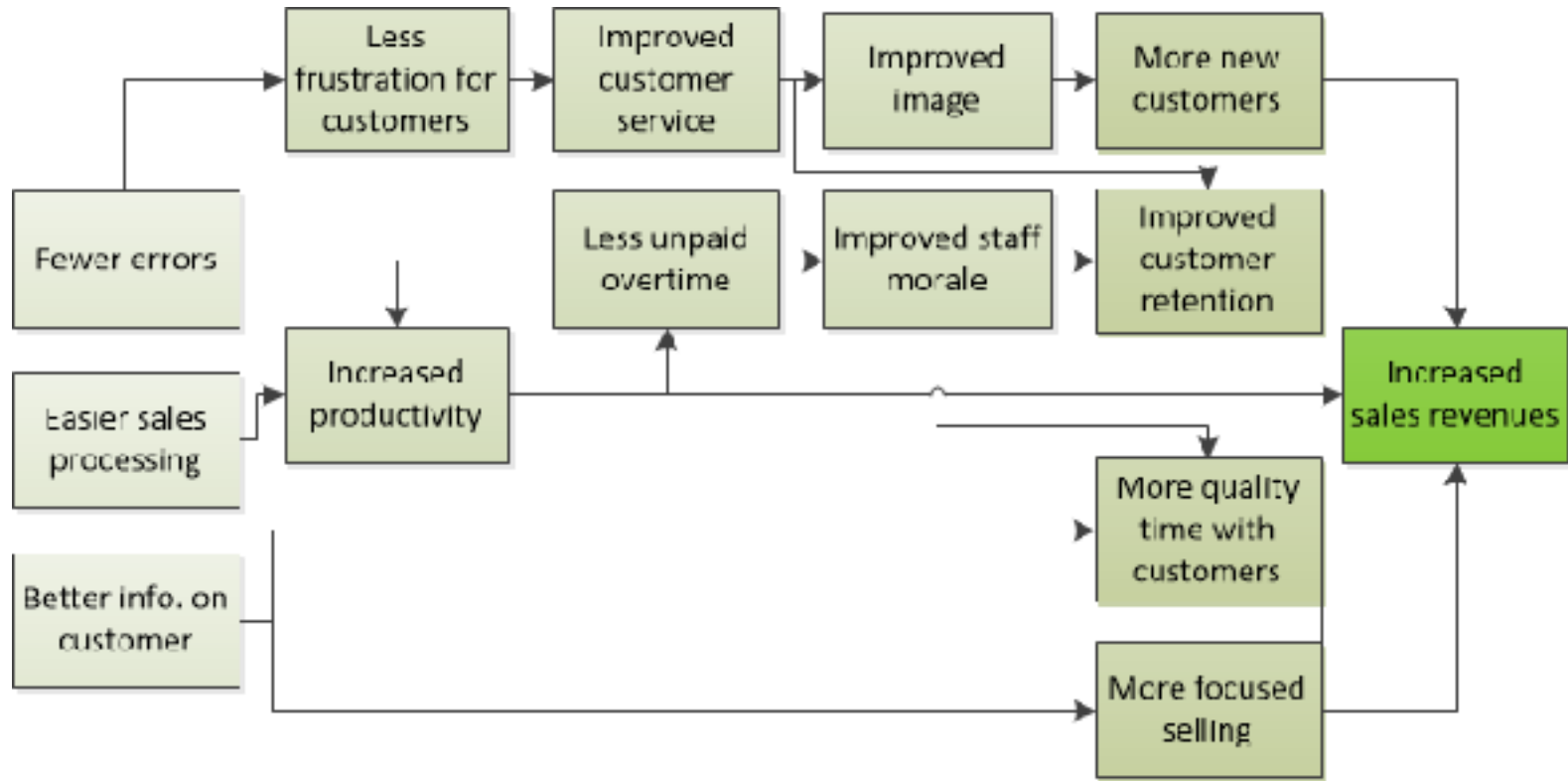
### MORE ON WHY QUESTION? BENEFIT LINKAGE EXAMPLE



\*Taken from the book "Benefit Realisation Management, Gerald Bradley"

# APPENDIX 2

## MORE ON WHY QUESTION? BENEFIT MAP



\*Taken from the book “Benefit Realisation Management, Gerald Bradley”  
Collaborative effort, depends on company and the benefit type. Looks easy but it is not

# APPENDIX 3

## RISK ANALYSIS

Risks  Potential negative impacts  Potential advantages opportunities

### Risk types (David Hillson/Risk Doctor)

- **Event risk:** An internal or external event that may occur
- **Variability risk:** A value that we are not sure of, about something that we know we will be doing or facing. The uncertainty is the value of the event when it happens
- **Ambiguity risk:** Lack of knowledge of events that we know will happen
- **Emergent risk:** Events that can happen, creep in at a later stage but we cannot list them now as they are unknown/beyond imagination at the point in time

- Risk analysis is not only important but also natural and simple (certainly not useless)
- Risk analysis should be applied to both threats as well as opportunities
- The framework of (Event, Variability, Ambiguity, Emergent) should be applied on both the threats and opportunities
- Workshops with extended stakeholders should perform collaboratively
- the risk analysis part

# APPENDIX 3

## RISK ANALYSIS

### Practical Example: LNG due diligence work-threats analysis per risk type

Event	Variability	Ambiguity	Emergent
<ul style="list-style-type: none"> <li>• Technical</li> <li>• Political</li> <li>• Economic</li> </ul>	<ul style="list-style-type: none"> <li>• Prices</li> <li>• Demand</li> <li>• Supply</li> <li>• Costs</li> </ul>	<ul style="list-style-type: none"> <li>• Contents of contract</li> <li>• LNG market dynamics</li> <li>• Cross country legal requirement</li> </ul>	<ul style="list-style-type: none"> <li>• Energy policy</li> <li>• New legislation</li> </ul>

- Risk analysis is the first step of the risk management cycle
- Risk actionee and risk owners (are desirable minimum requirements) to be associated with the analysis. A complete risk register can then be formed depending on the maturity of the organization
- Risk handling differ for each type of risk

# APPENDIX 3

## RISK HANDLING

Event	Variability	Ambiguity	Emergent
<ul style="list-style-type: none"><li>• Handling (Identify, estimate, plan (the response) and implement</li></ul>	<ul style="list-style-type: none"><li>• Putting a range of values mainly using quantitative analysis</li></ul>	<ul style="list-style-type: none"><li>• Talk a lot, seek advise or in other words a lot of due diligence to be prepared</li></ul>	<ul style="list-style-type: none"><li>• Develop flexible solutions</li></ul>

- Handling of risk depends on the type of risk
- For event risk, we get a list of these events and manage them via risk register

# APPENDIX 4

## MORE ON THE WHY/WHAT AND OTHER QUESTIONS

Change Management, The People Side of Change (JEFFREY M. HIATT, TIMOTHY J. CREASEY)

- **Why:** we are doing this change/project/programme?
- **Why:** we are doing this change **now**?
- **What:** will happen if we do not do this change?
- **Can:** we wait to start this change? No. Yes? If yes; why? For how long?
- **What:** does this change mean for me?
- **How:** will I respond to this change? **What:** are my choices of response?

- Simple questions yet very powerful questions and if we can get the alignment of various stakeholders on these questions, the chances of the success are much much higher. Simple is genius
- The project manager of the change manager should lead the workshops to answer these questions