

LECTURE 1:

Introduction to Project Management (PM): Key Concepts in the Context of Research & Sustainability

Ihor Soloviy

Professor, *Department for Ecological Economics and Business*,
Ukrainian National Forestry University



Content

1. Project. What is it about?

- Concept of a R&D project. Project management maturity model.

2. Project management as a process

- Development phases, characteristics, risks, and variances.
 - Knowledge management. Project success criteria.

3. Planning and Team building

4. The intersection of Project Management and "Green"/Sustainability

https://www.linkedin.com/in/ihor-soloviy

Ihor Soloviy
Professor, Dr. of Economic Sciences at the Ukrainian National Forestry University
Ukraine · [Контактна інформація](#)
376 контактів

[Відкритий\(-а\) для](#) [Додати розділ профілю](#) [Більше](#)

Покажіть рекрутерам, що ви відкриті для роботи — ви контролюєте, хто це бачить. [Почати](#)

Поділіться, як кваліфіковані [Почати](#)

ResearchGate Home Questions Jobs Search for research, people, and more

Ihor Soloviy [Edit](#)
Doctor of Economic Sciences, PhD · Professor at Ukrainian National Forestry University
Ukraine | [Website](#)
Current activity

Research Interest Score 1,000
Citations 1,670
h-index 11
[Citations over time](#)

https://www.scopus.com/authid/detail.uri?authorId=22981645200

Scopus Preview Author Search Sources [Create account](#) [Sign in](#)

This author profile is generated by Scopus. [Learn more](#)

Soloviy, Ihor P.
[Ukrainian National Forestry University, Lviv, Ukraine](#) [22981645200](#) [https://orcid.org/0000-0001-5885-6264](#)

1,148 Citations by 1,121 documents	15 Documents	8 h-index View h-graph
---------------------------------------	-----------------	---

[Set alert](#) [Edit profile](#) [More](#)

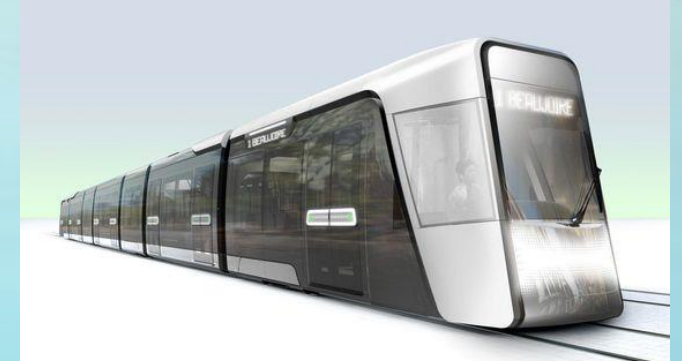
Document & citation trends

Scopus Preview
Scopus Preview users can only view a limited set of features. Check your institution's access to view all documents and features.
[Check access](#)

What do the following headlines have in common?

- Millions watch Olympic Opening Ceremony
- Citywide WiFi System Set to Go Live
- Hospital Experiences Responding to the COVID-19 Pandemic
- Apple's New iPhone Hits the Market
- City Receives Stimulus Funds to Expand Light Rail System

All of these events represent projects



This is the world of project management (instead of introduction)

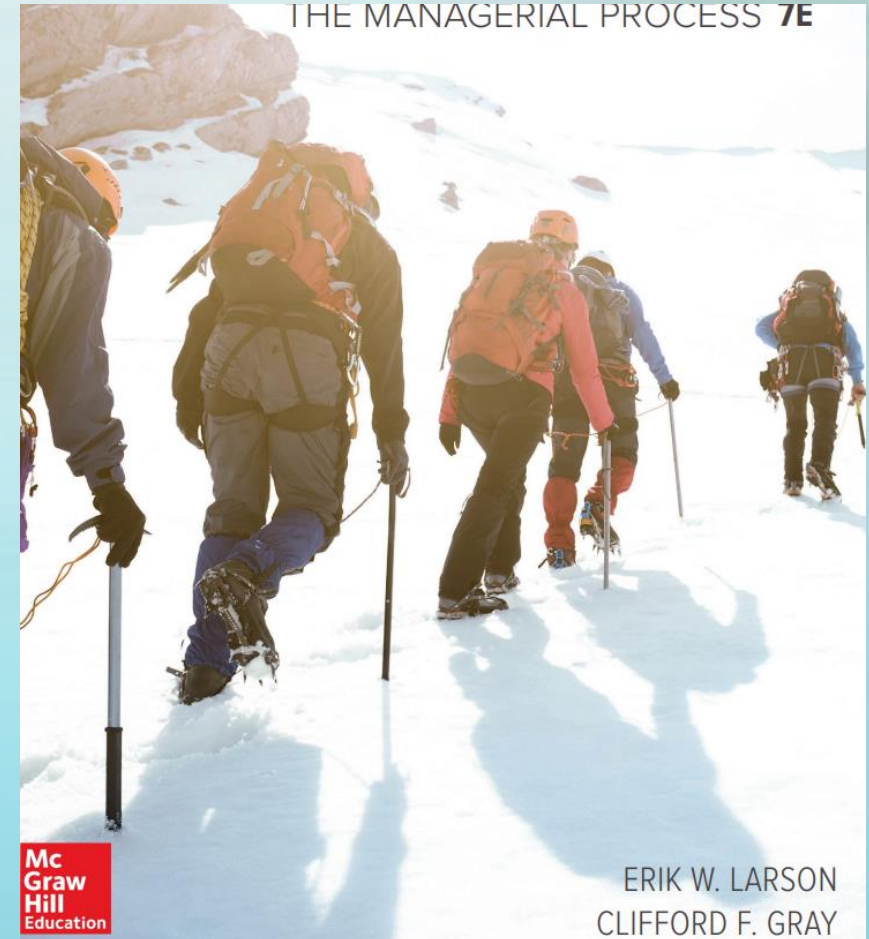
- Business leaders and experts have proclaimed that **project management is critical to sustainable economic growth**. New jobs and competitive advantage are achieved by constant innovation, developing new products and services, and improving both productivity and quality of work.
- Project management provides people with a powerful set of tools that improves their ability **to plan, implement, and manage activities to accomplish specific objectives**.

The Project Management Institute provides the following **definition of a project**:

- A project is a temporary endeavor undertaken to create a **unique product, service, or result**

What a **Project Is Not**

- Projects should not be confused with everyday work. A project is not routine, repetitive work!
- Ordinary daily work typically requires doing the same or similar work over and over, while a project is done only once; **a new product or service exists when the project is completed.**



Comparison of Routine Work with Projects

Routine, Repetitive Work

- Taking class notes
- Daily entering sales receipts into the accounting ledger
- Responding to a supply-chain request
- Practicing scales on the piano

Projects

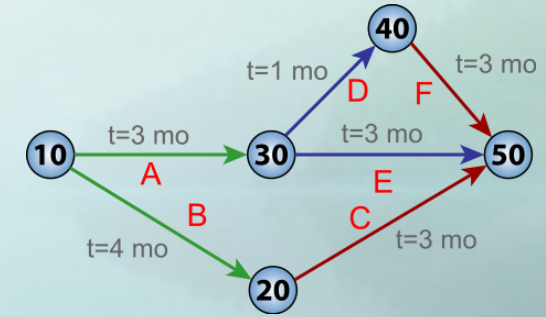
- Writing a term paper
- Setting up a sales kiosk for a professional accounting meeting
- Developing a supply-chain information system
- Writing a new piano piece

History (1)

- The concept of project management (PM) has been around since the beginning of history. It has enabled leaders to plan bold and massive projects and manage funding, materials, and labor within a designated time frame.
- In late 19th century, in the United States, large-scale government projects were the impetus for making important decisions that became the basis for PM methodology
- By the mid-20th century, projects were managed on an ad hoc basis using mostly Gantt charts and informal techniques and tools.

History (2)

- The 1950s - beginning of the modern PM era. Two mathematical project-scheduling models were developed :
 - *The program evaluation and review technique (PERT)* was developed by Booz-Allen and Hamilton as part of the United States Navy's Polaris missile submarine program
 - *The critical path method (CPM)* was developed in a joint venture by DuPont Corporation and Remington Rand Corporation for managing plant maintenance projects.
 - Project management in its present form began to take root in the early 1960s, when industrial and business organizations began to understand the benefits of organizing work around projects.



- [PMI Names Most Influential Projects 2022 | #MIP2022 - YouTube](#)

Most Influential Projects 2022

[Home](#)

[50 Most Influential Projects](#)

[Top 10 by Industry](#)

[Top 10 Region](#)



Share



[Tweet](#)



PMI's Most Influential Projects of 2022

Home

50 Most Influential Projects

Top 10 by Industry

Top 10 Region

Architecture

Climate Action

Diversity, Equity & Inclusion

Entertainment

Government

Mobility

Space

Workplace Transformation

Biotech

Consumer Products & Services

Education

Finance

Health

Retail

Technology

Business Products & Services

Data Science

Energy

Gaming

Infrastructure

Robotics

Urban Development

Share

Share

Tweet

Share

Give Feedback

Type here to search

Windows Taskbar

Search

Taskbar Icons

9:28 AM

3/22/2023

ENG

1

Climate Action

Share Share Tweet Share



01 Project Gigaton
Climate Action | North America



02 Orca
Climate Action | Europe
Built on a barren expanse

03 Earth's Black Box
Energy

One day soon, a steel vault in the middle of a plain in Tasmania, Australia, will quietly record every action—and inaction—the world takes to address climate change. Conceived by

Europe



01 Energy Island

Energy | Europe

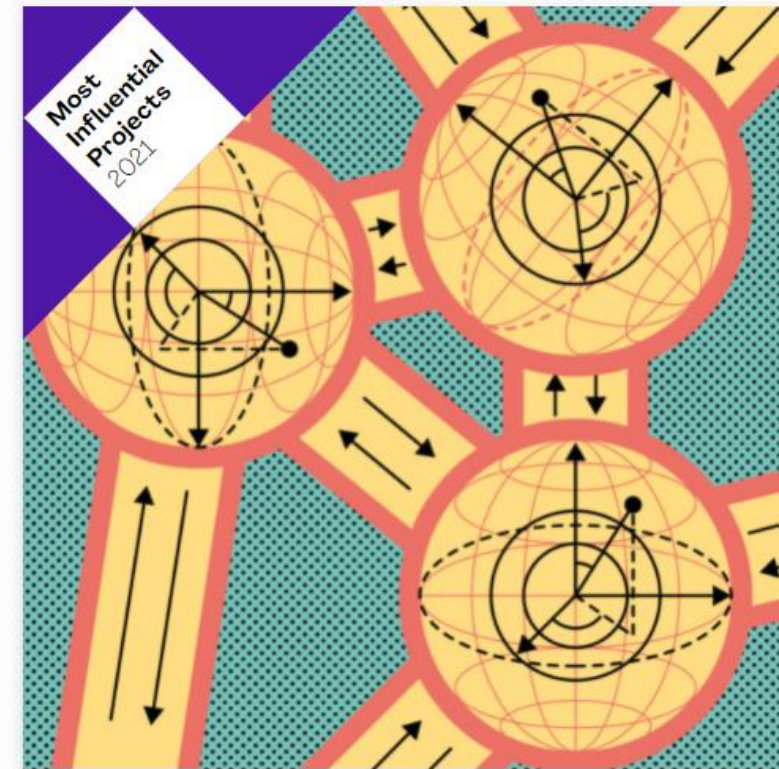
Thirty years after Denmark built the first offshore wind farm, it's pioneering another energy first: creating an artificial island expected to generate enough wind power for the country's entire grid.



02 Project Earth

Retail | Europe

By collaborating with brands and environmental changemakers including the Woodland Trust and WWF, luxury department store



03 Multi-Node Quantum Network

Technology | Europe

Why project management is crucial in today's world

- All of mankind's greatest accomplishments — from building the great pyramids to discovering a cure for polio to putting a man on the moon — began as a project.
- Approximately \$2.5 trillion (about 25 % of the U.S. gross national product) is spent on projects each year in the United States alone
- Project management is also a vehicle for doing good deeds and solving social problems
- Millions of people around the world consider project management the major task in their profession (Membership Project Management Institute (PMI), a professional organization for project managers has grown from 93,000 in 2002 to more than 478,000).

Skills of project manager (1)

Example: Graphic Artists

Graphic artists plan, analyze, and create visual solutions to communication problems. They use many skills found in project management, especially communications. They work to achieve the most effective way to get messages across in print and electronic media. They emphasize their messages using color, type, illustration, photography, animation, and various print and layout techniques. Results can be seen in magazines, newspapers, journals, corporate reports, and other publications. Other deliverables from graphic artists using project management skills include promotional displays, packaging, and marketing brochures supporting products and services, logos, and signage. In addition to print media, graphic artists create materials for the web, TV, movies, and mobile device apps.

Initiation in project management can be seen in developing a new design: determining the needs of the client, the message the design should portray, and its appeal to customers or users. Graphic designers consider cognitive, cultural, physical, and social factors in planning and executing designs for the target audience, very similar to some of the dynamics a project manager considers in

Skills of project manager (2a)

1.9 Science Technicians



Available under [Creative Commons-ShareAlike 4.0 International License \(http://creativecommons.org/licenses/by-sa/4.0/\)](http://creativecommons.org/licenses/by-sa/4.0/).

Science technicians use principles and theories of science and mathematics to assist in research and development and help invent and improve products and processes. In their jobs, they are more practically oriented than scientists. Planning skills project managers use can be seen as science technicians set up, operate, and maintain laboratory instruments; monitor experiments; and observe, calculate, and record results. Quality is a factor here as it is in project management; science technicians must ensure that processes are performed correctly, with proper proportions of ingredients, for purity or for strength and durability.

There are different fields in which science technicians can apply project management skills. Agricultural and food science technicians test food and other agricultural products and are involved in food, fiber, and animal research, production, and processing. Control and risk management are important here in executing the tests and experiments, for example, to improve the yield and quality of crops, or the resistance of plants and animals to disease, insects, or other hazards. Quality factors are paramount when food science technicians conduct tests on food additives and preservatives to ensure compliance with government regulations regarding color, texture, and nutrients.

Skills of project manager (2b)

Biological technicians work with biologists studying living organisms. Many assist scientists who conduct medical research or who work in pharmaceutical companies to help develop and manufacture medicines. Skills in scheduling, especially in incubation periods for the study of the impact on cells, could impact projects, such as exploring and isolating variables for research in living organisms and infectious agents. Biotechnology technicians apply knowledge and execution skills and techniques gained from basic research, including gene splicing and recombinant DNA, to product development. Project management skills are used in collaboration and communication among team members to record and understand the results and progress toward a cure or product.

Other kinds of technicians are chemical technicians who may work in laboratories or factories, using monitoring and control skills in the way they collect and analyze samples. Again, quality assurance is an important factor for most process technicians' work in manufacturing, testing packaging for design, ensuring integrity of materials, and verifying environmental acceptability.

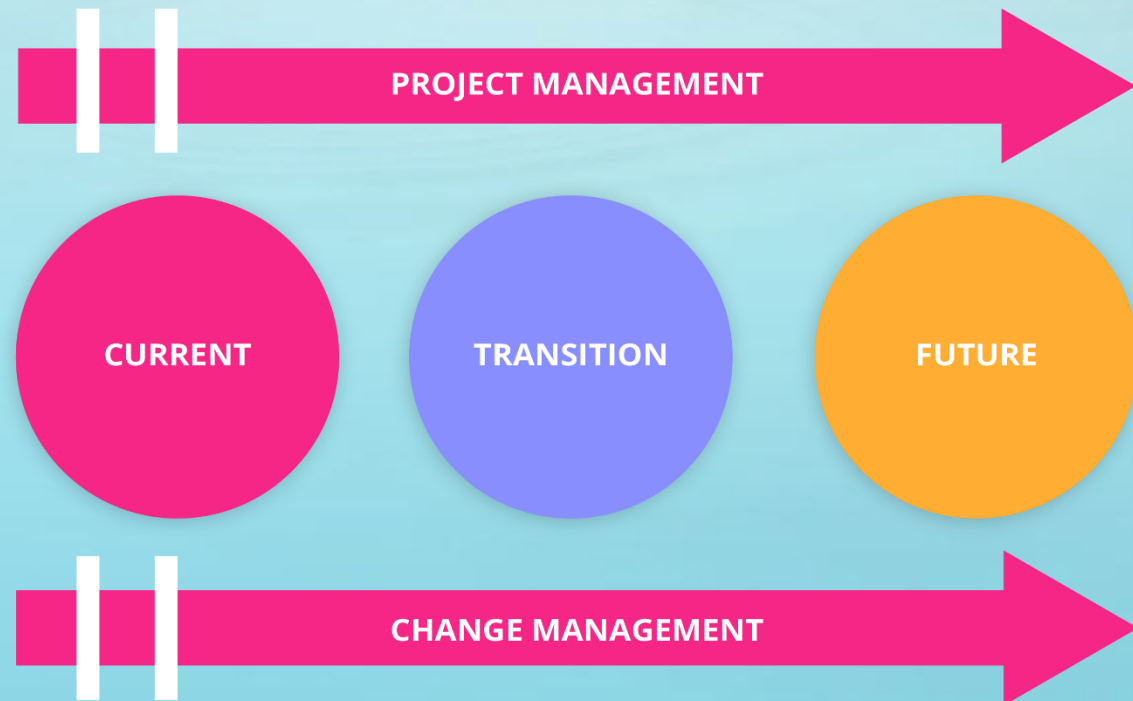
Technicians use a project management skill set to assist in their initiation, planning, and executing tasks, while managing risks with some measure of reporting to determine if their objectives satisfy the constraints of cost, schedule, resource, and quality standards set.

The main features of project

- Temporary in nature (e.g. create a set of online tutorials about using some documents)
- Specific goals (e.g. set of online tutorials on valuing ecosystem services of urban forests and parks)
- Clear-cut starting and ending date
- Dedicated funding (in most cases)

Projects are About Change

- Change that can be measured/evaluated over time
 - how will behaviour be changed?
 - how will the change impact/benefit our users, staff?
 - what will be done more efficiently, effectively, or that we couldn't do before?



Some Characteristics of Projects

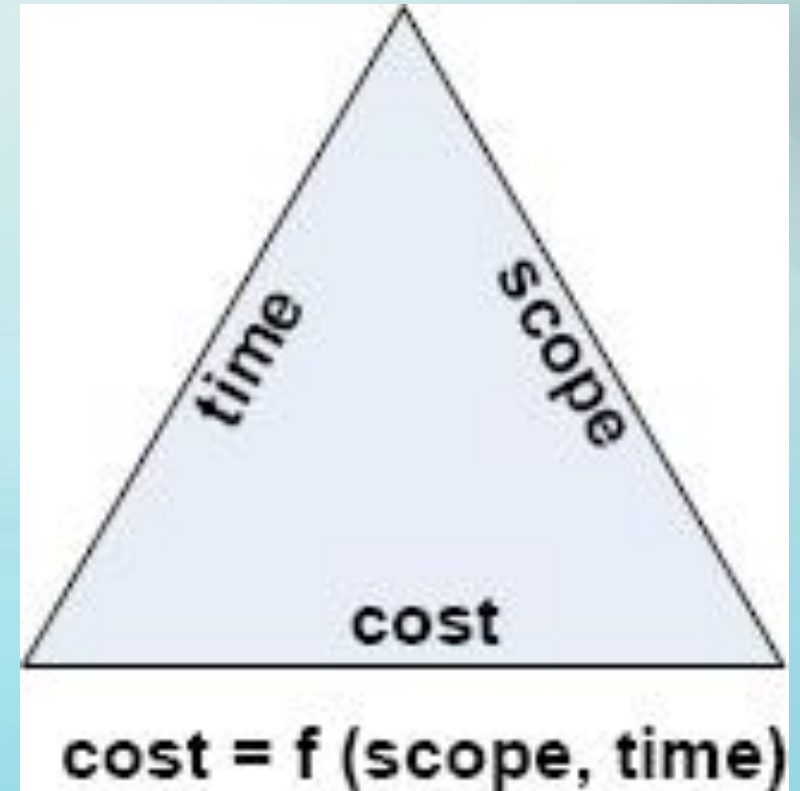
- Projects are unique undertakings that results in a single unit of output
- Projects are composed of independent activities
- Projects create a quality deliverable
- Projects involve multiple resources
- Projects are not synonymous with the products of the projects
- Projects are driven by competing constrains

Dinsmore P. C., & Cabanis-Brewin J. (2018). The AMA handbook of project management. 5 th edition. HarperCollins Leadership.

Project Constraints Model

A successful project:

- Delivers the outcome with an agreed upon quality.
- Does not overrun its end date.
- Remains within budget (cost of resources).



Baratta, A. (2006). The triple constraint: a triple illusion. Paper presented at PMI® Global Congress 2006—North America, Seattle, WA. Newtown Square, PA: Project Management Institute.

The dynamic trade-offs between the project constraint values

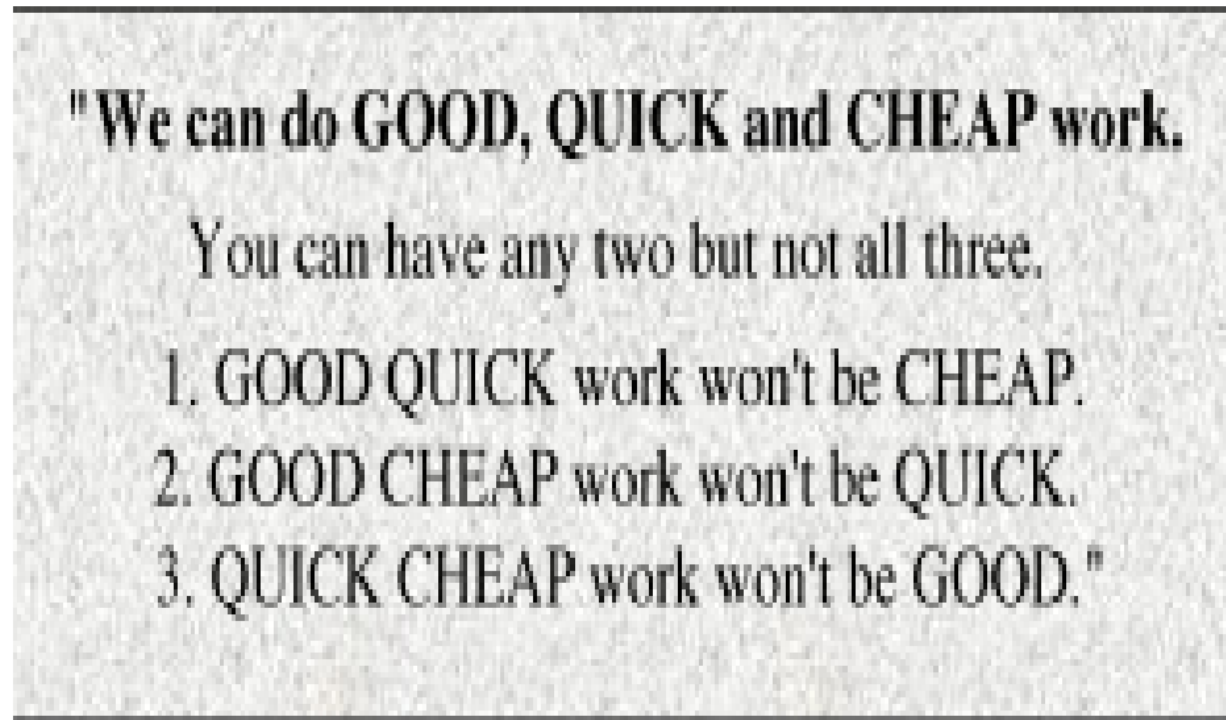
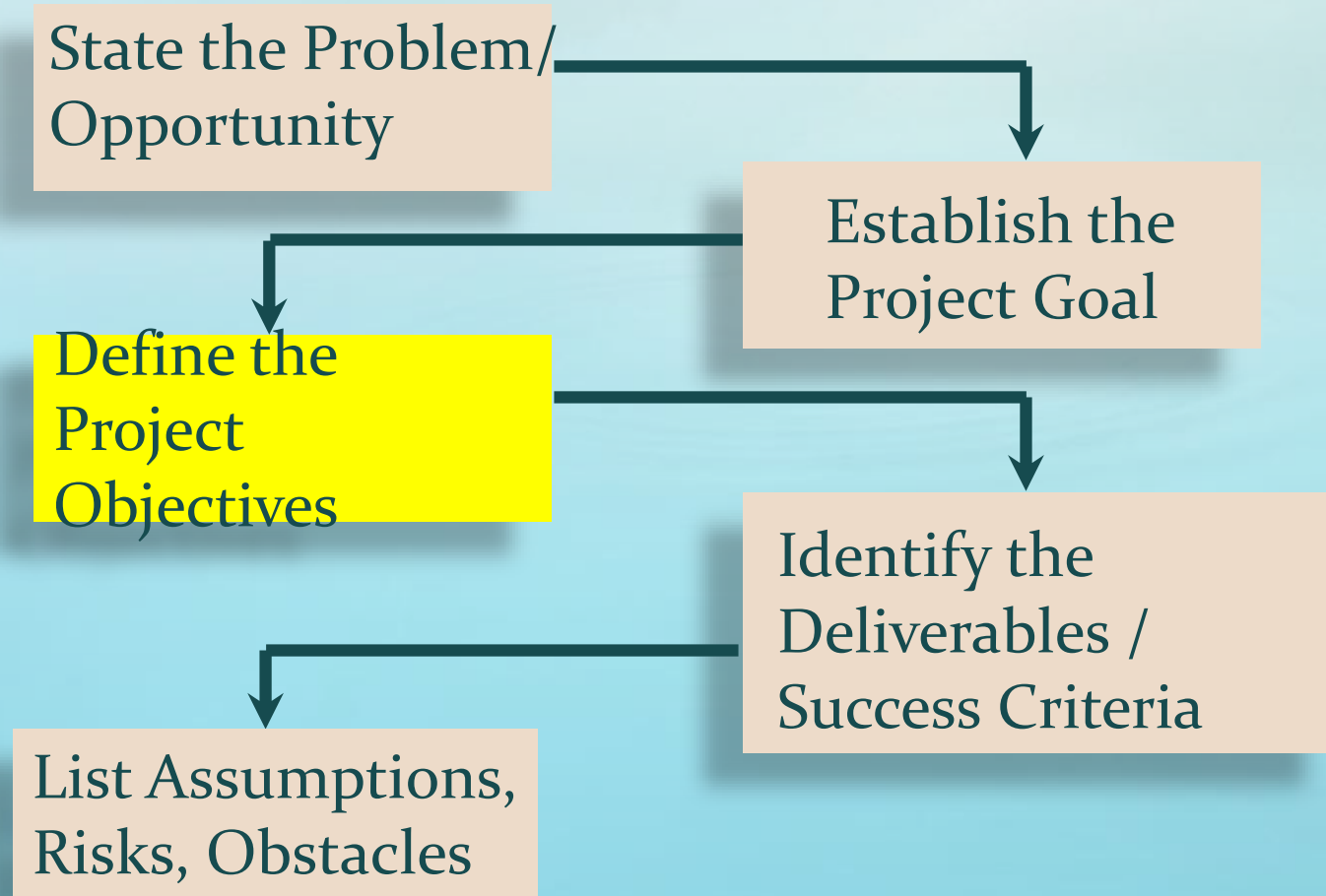


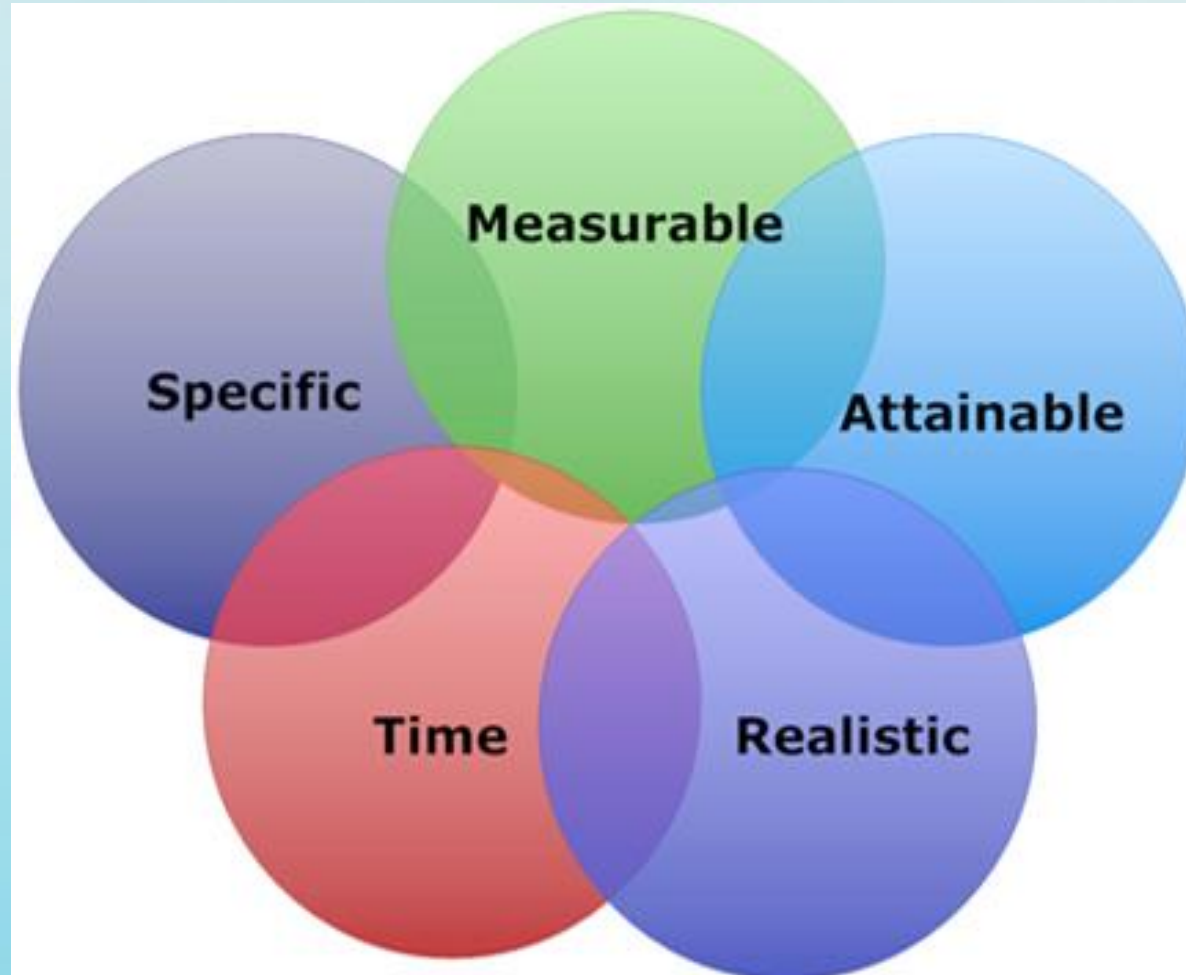
Figure 2.5 A sign seen at an automotive repair shop. Illustration from Barron & Barron Project Management for Scientists and Engineers.

(<http://cnx.org/content/m31508/latest/?collection=col11120/1.4>) .

Process



S.M.A.R.T. Objectives

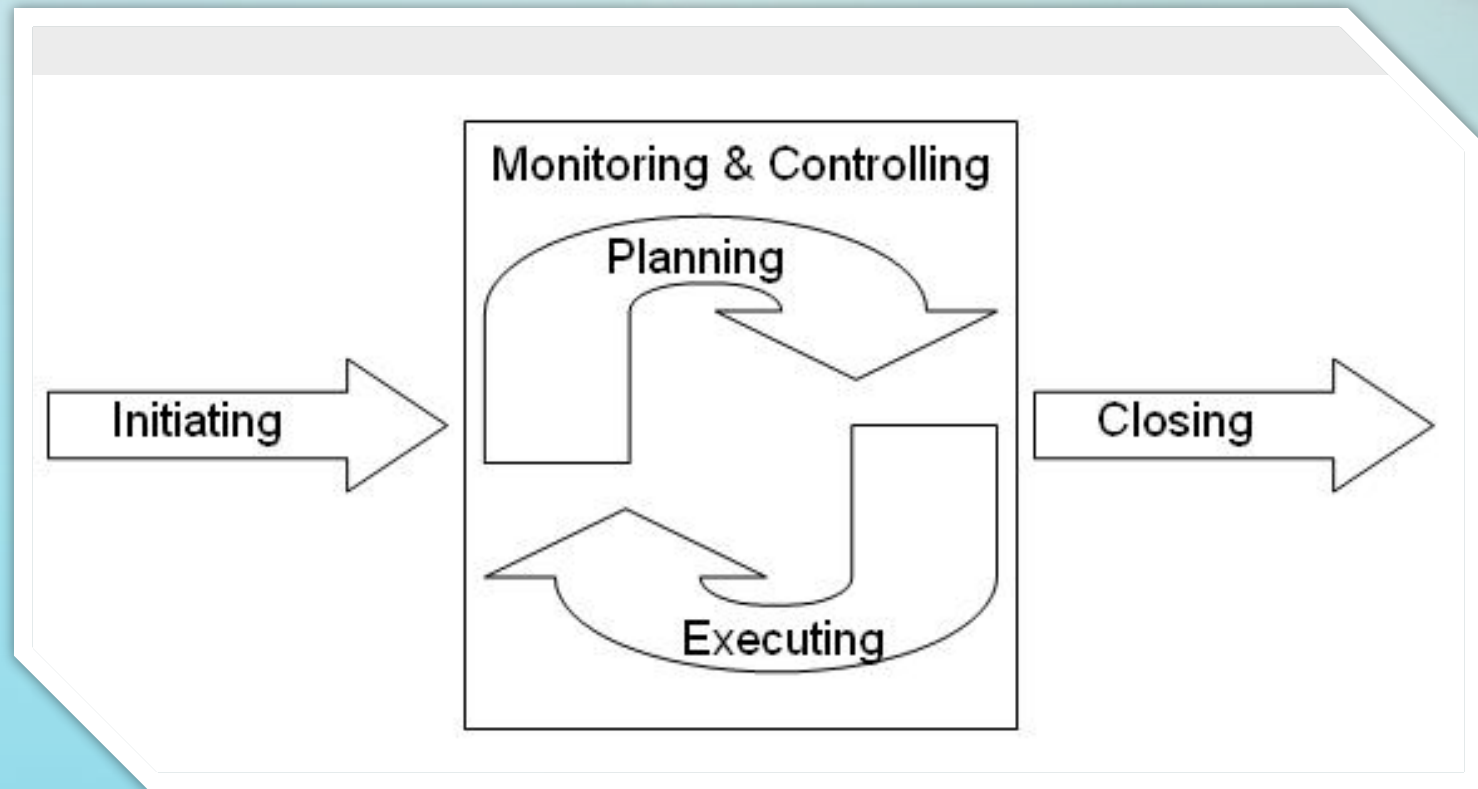


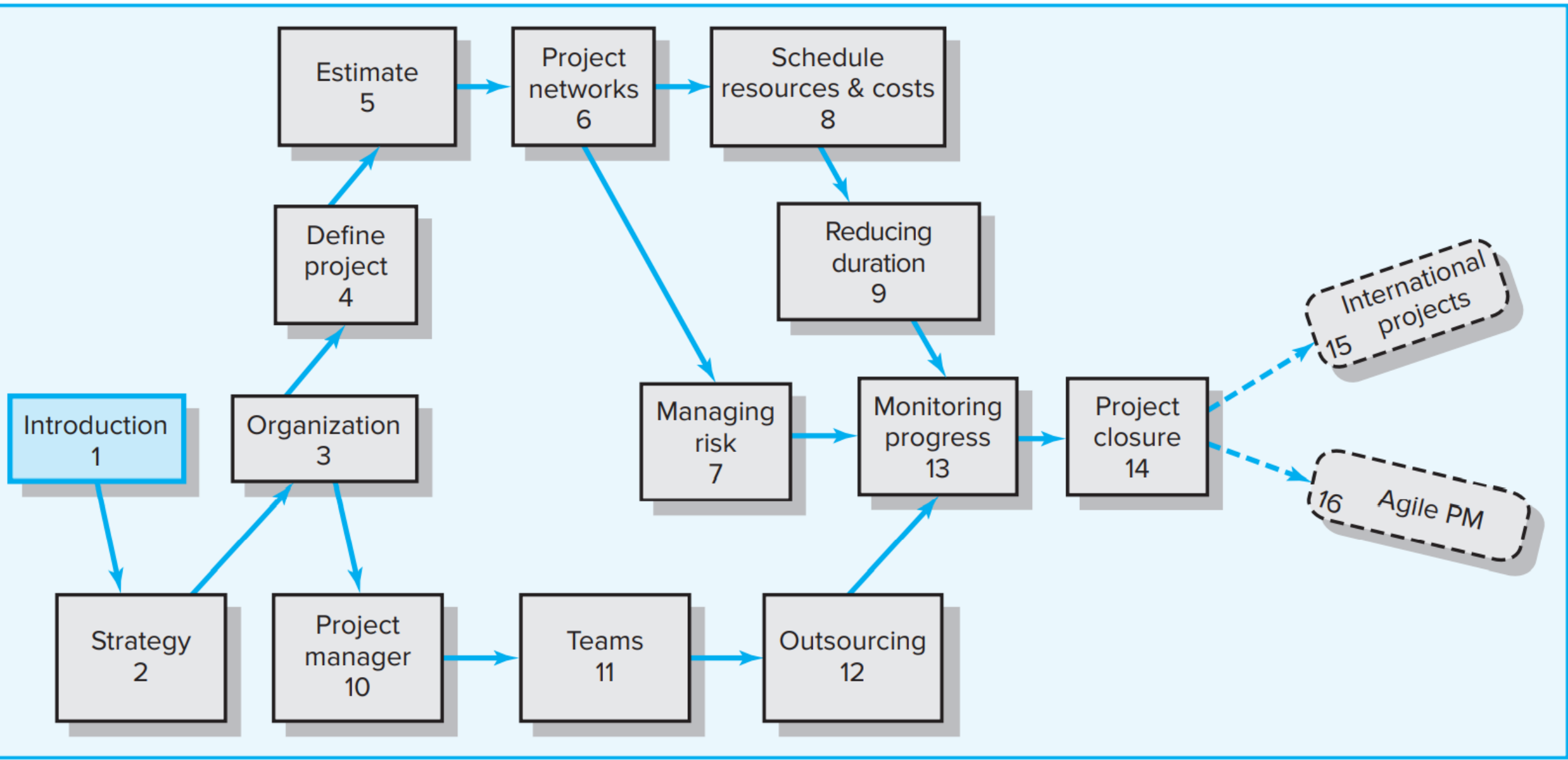
Project Life Cycle

- **Initiation Phase (Scoping the Plan):** identify need, deliverables & assign priority
- **Planning Phase (Developing the Plan):** project specifics, such as tasks, milestones, and associated costs
- **Implementation Phase (Executing the Plan):** applies project plan; direct team in producing deliverables; implement approved changes and corrective actions
- **Monitoring & Controlling Process:** monitor the project's schedule and budget, making adjustments as necessary, mitigate risk
- **Completion Phase (Closing Out the Project):** project assessment & wrap-up report, integrating into ongoing operations

Project Management Process

- The basic elements of project management are illustrated in this project life cycle diagram.





Elements of project management in the project process

The main concepts

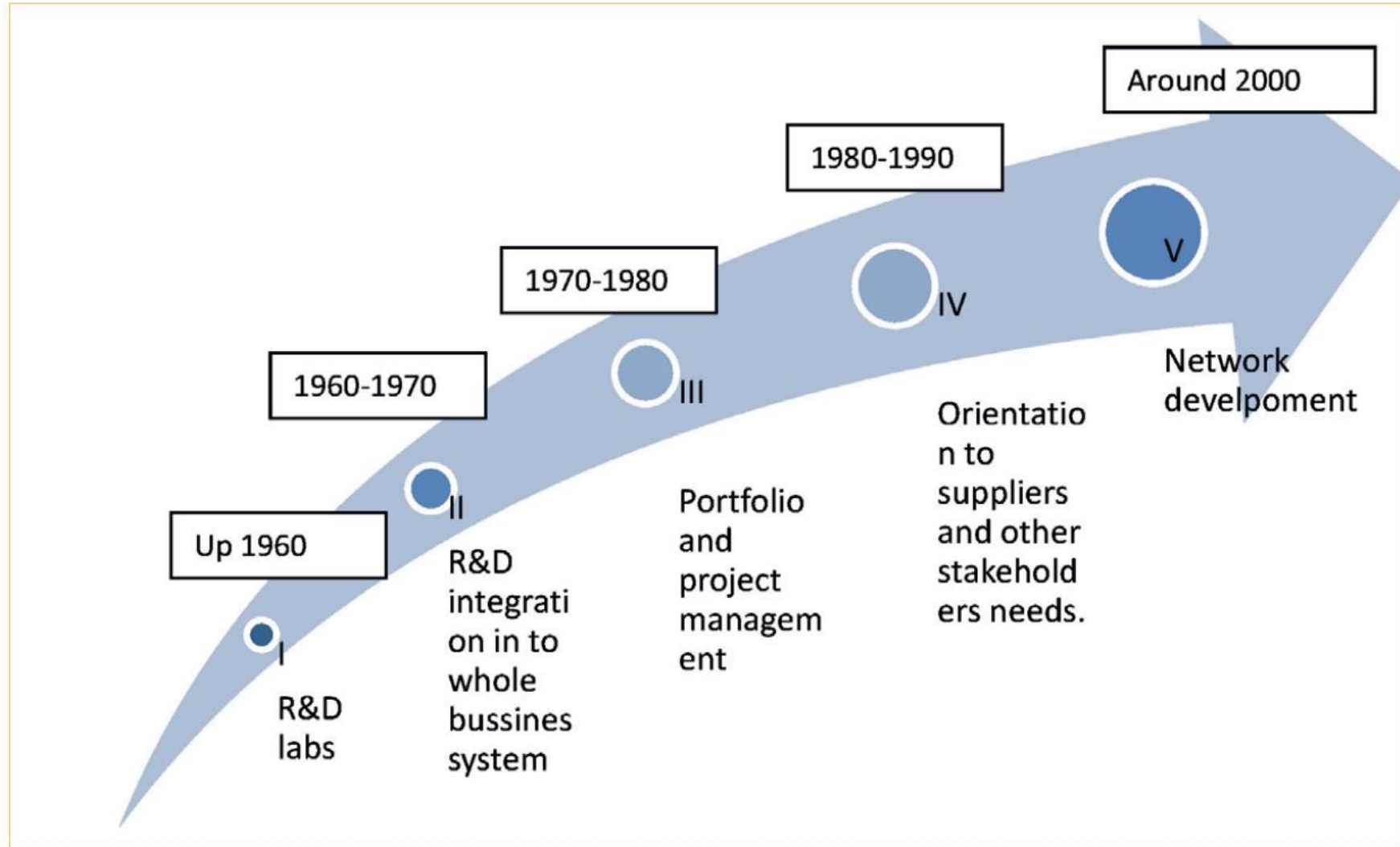
Research

Research is a systematic study directed towards fuller scientific knowledge or understanding of the subject studied. Research is classified as either fundamental or applied research

Research and development

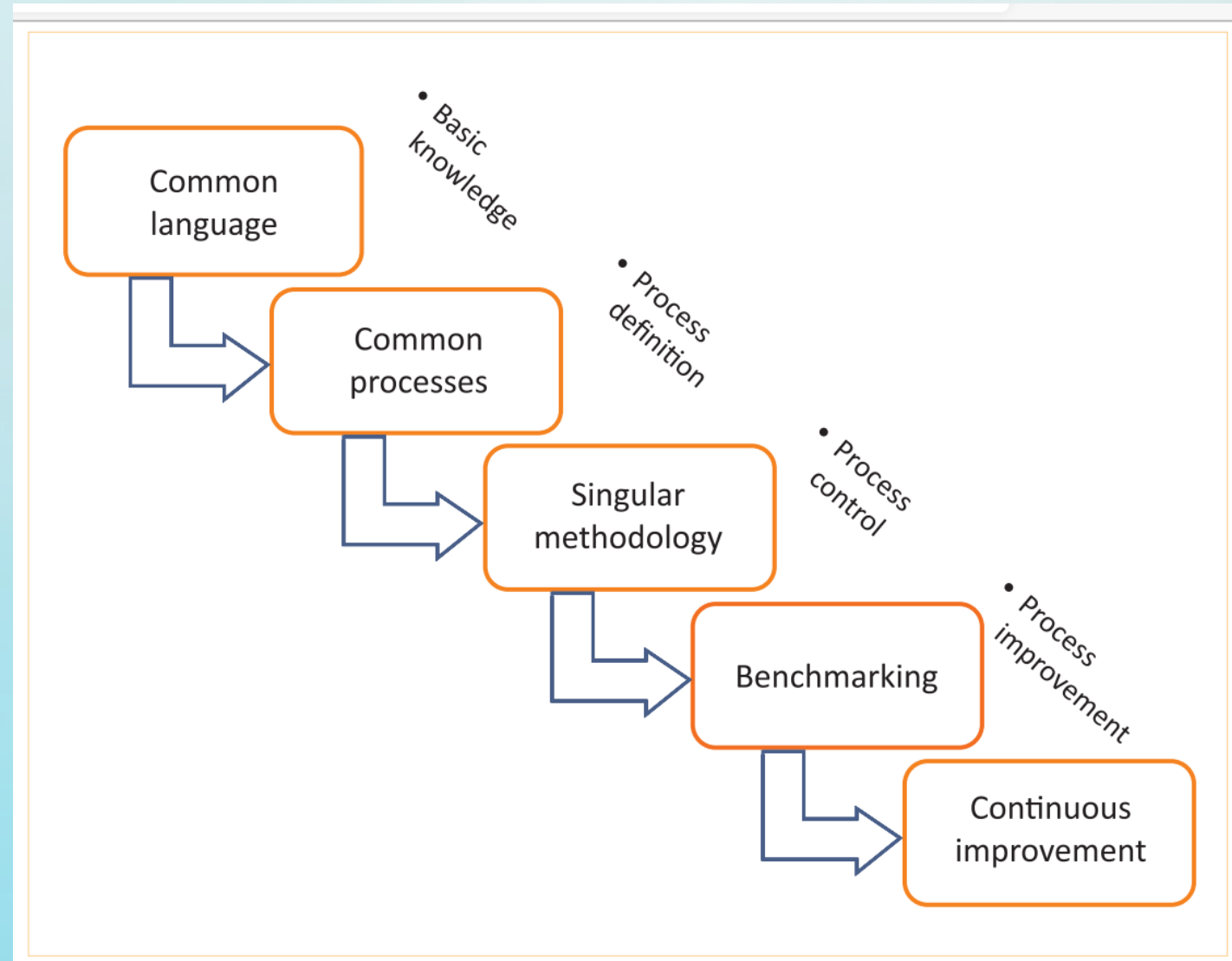
Used to refer to activities for intellectual work creating new knowledge (research) and developing new products. Common abbreviation is R&D

Evolution of R&D management generation



Mikulskienė, 2014.

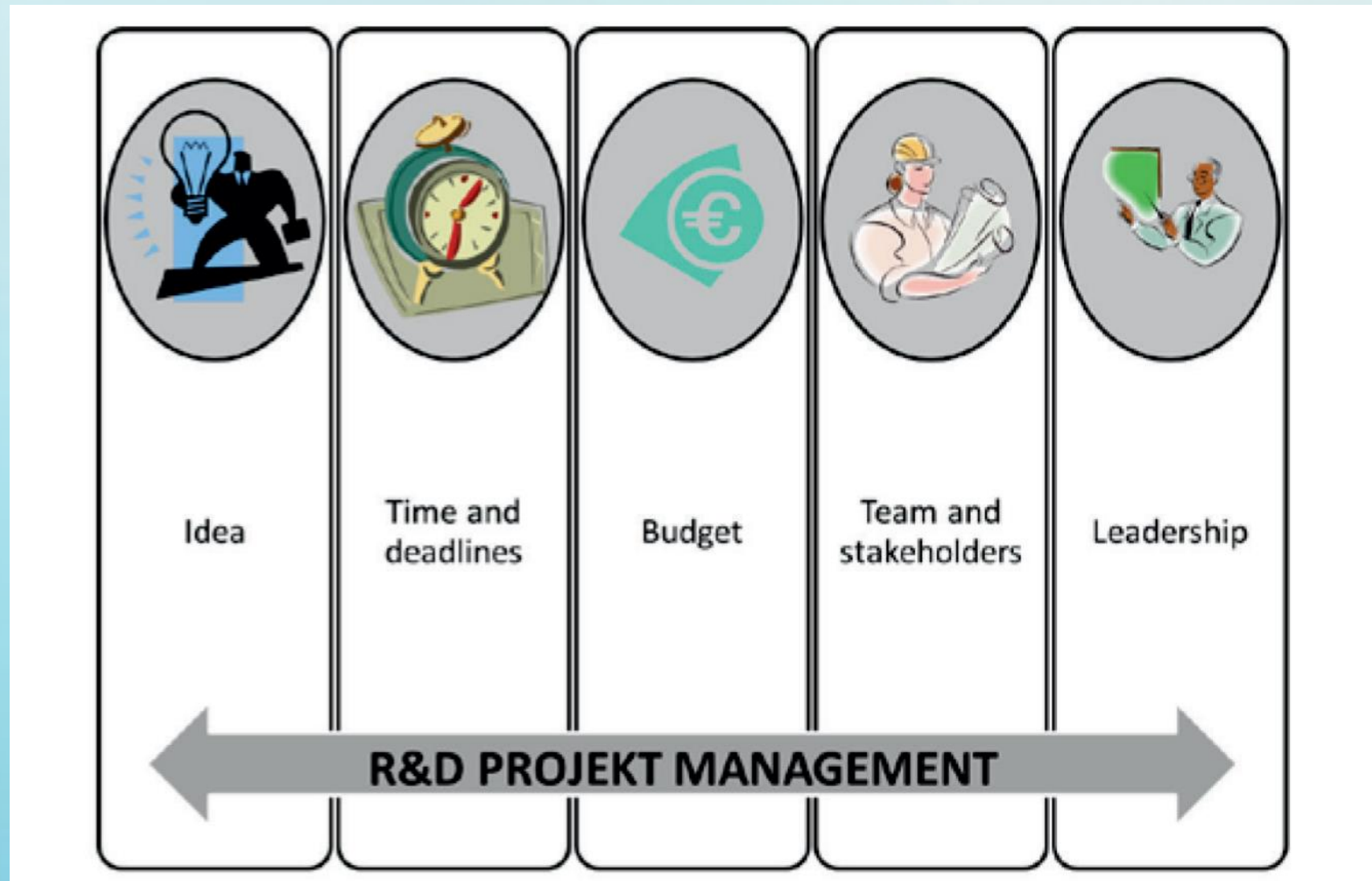
Project management maturity model



Jincao, W. and Kleiner, B.H. (2005) The Evolution of R&D Management, Management Research News, Vol. 28 No.11/12, p. 88-95.

Park, Y. and Kim, S. (2005) Linkage between Knowledge Management and R&D Management. Journal of Knowledge Management, Vol. 9 No. 4, p. 34-44.

R&D Project Management Concept



R&D project management risks and variances

1. **Market payoff variability.** It is prices and sales forecasted. They depend on the external factors that are outside the project control: demographic changes, behaviour of competitors etc.
2. **Budget variability.** The running project cost is hard to keep at planned level for R&D projects. Overspending and underspending could occur.
3. **Performance variability.** It corresponds to uncertainty of product development. Some technical aspects of technologies could be developed in multiple ways and which one will gain better performance is hard to predict.
4. **Market requirement variability.** Market requirements are almost unknown, especially at the beginning phase of the project and in the idea conceptualisation phase.
5. **Schedule Variability.** Project performance impacts scheduling and the project could be completed earlier or later than planned in advance.

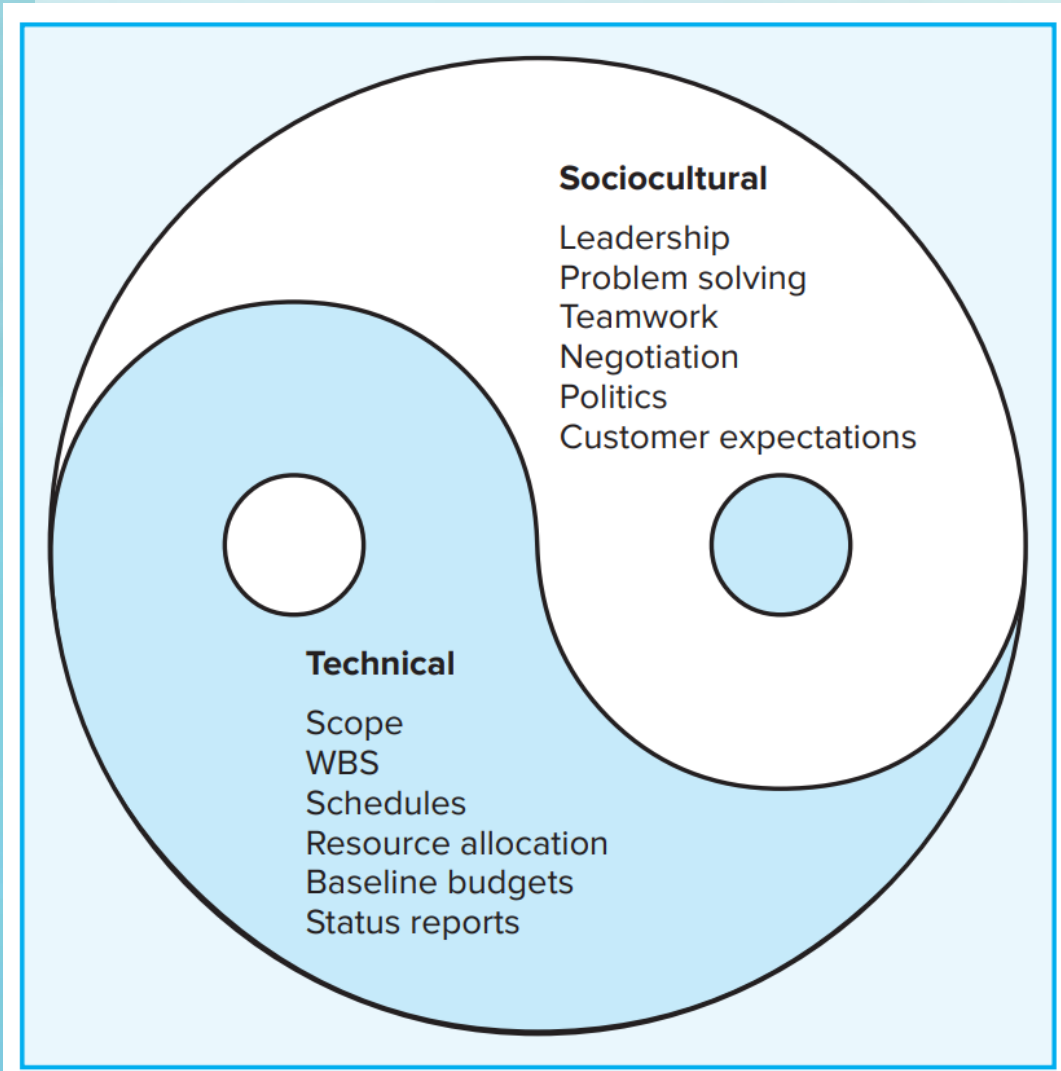
Benefits of R&D project management

- seeing the big picture, prioritising important tasks, minimising efforts on unfruitful side tracks
- better understanding difficult tasks ahead
- staying focused on the objectives
- making better estimates of time and resource needs
- improving communication among key personnel
- seeing the need to look at alternative approaches or technologies
- making better decisions when dealing with trade-offs between time, performance and resource constraints

Project success criteria

- **Organisational value:** How perfectly will results help company in R&D cooperation in the future? Whether any new idea has been created for the next R&D stage?
- **Social value:** Sooner or later, R&D output usually becomes a public good, social value for the city, region or country could thus be evaluated.
- **Professional value:** Renewing and regaining professional competence is as relevant as primary goal of the project (individual competencies of a researcher, research competence of the whole organization).
- **Economic value:** Economic value is the most widespread practice to value project success, however it is complicated to measure it directly for a R&D project. Nevertheless, the supplementary economic value, such as new jobs, economic growth or increase innovation capacity needs to be evaluated jointly.

A Socio-Technical Approach to Project Management



- The **technical dimension** represents the “**science**” of project management while the **sociocultural dimension** represents the “**art**” of managing a project.
- To be successful, a manager must be a master of both.

Project management : the managerial process /
Erik W. Larson, Clifford F. Gray. New York, NY :
McGraw-Hill Education, 2018

This is the world of project managementwhich is based on project teams

- But project management is more than just a set of tools;
- it is a **results-oriented management style that places a premium on building collaborative relationships** among a diverse cast of characters. Exciting opportunities await people skilled in project management (Larson and Gray, 2018)

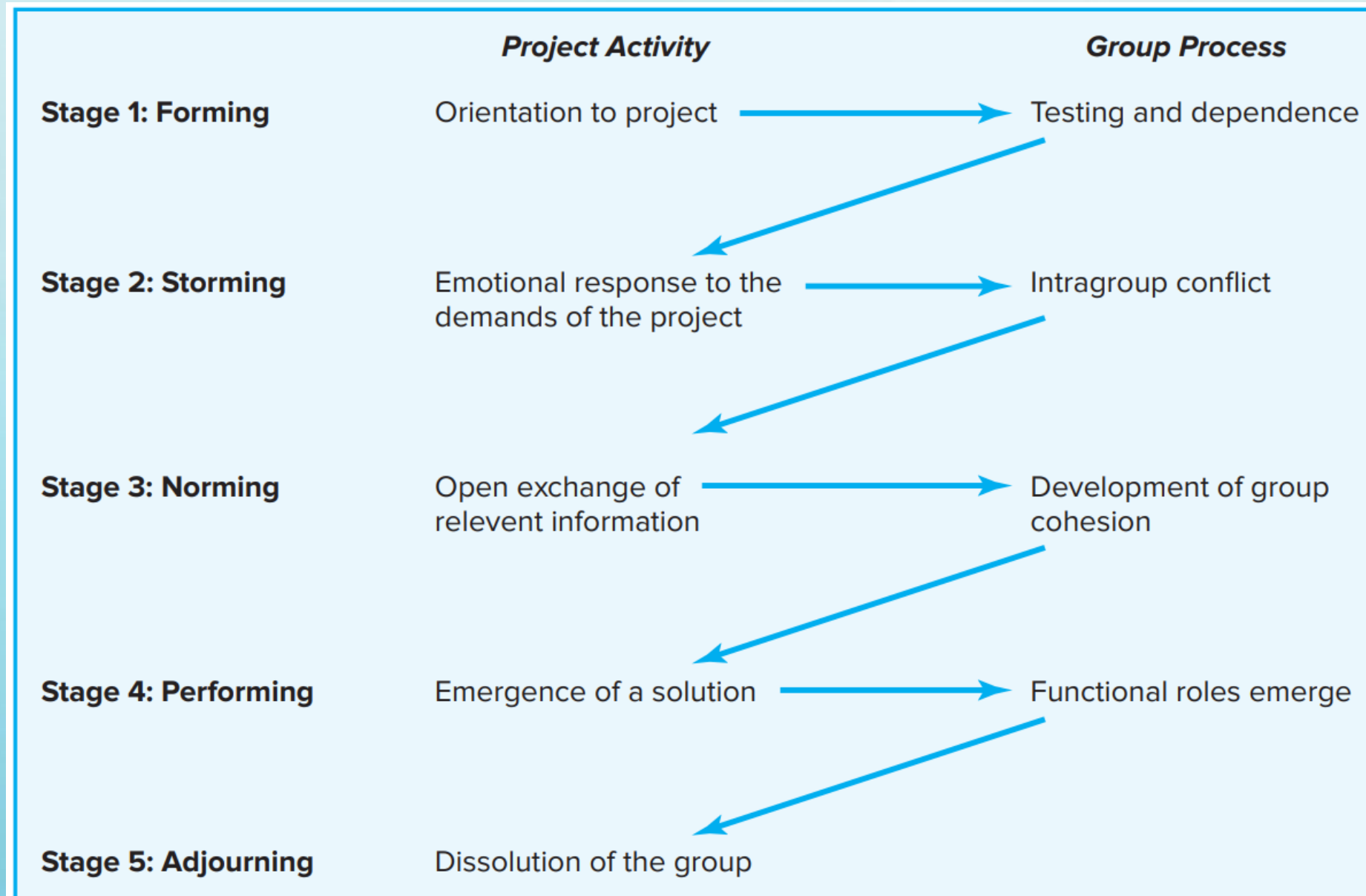
Characteristics of high-performing teams (1)

1. The team shares a **sense of common purpose**, and each member is willing to work toward achieving project objectives.
2. The team identifies **individual talents and expertise** and uses them, depending on the project's needs at any given time. At these times, the team willingly accepts the influence and leadership of the members whose skills are relevant to the immediate task.
3. **Roles are balanced and shared** to facilitate both the accomplishment of tasks and feelings of group cohesion and morale.
4. The team exerts energy toward **problem solving** rather than allowing itself to be drained by interpersonal issues or competitive struggles

Characteristics of high-performing teams (2)

5. Differences of opinion are encouraged and freely expressed.
6. To encourage risk taking and creativity, mistakes are treated as opportunities for learning rather than reasons for punishment.
7. Members set high personal standards of performance and encourage each other to realize the objectives of the project.
8. Members identify with the team and consider it an important source of both professional and personal growth.

The five-stage team development model



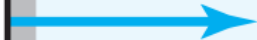
High-performance project teams are much more likely developed under conditions

- There are 10 or fewer members per team.
- Members volunteer to serve on the project team.
- Members serve on the project from beginning to end.
- Members are assigned to the project full time.
- Members are part of an organization culture that fosters cooperation and trust.
- Members report solely to the project manager.
- All relevant functional areas are represented on the team.
- The project involves a compelling objective.
- Members are located within conversational distance of each other

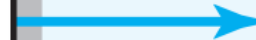
Creating a high performance project team



Recruit
team members



Conduct project meetings
Establish team identity
Create a shared vision
Build a reward system
Manage decision making
Manage conflict
Rejuvenate the project team



Superior
performance

Project Management Dictionaries/ Glossaries

(with hyperlinks)

- [Lexicon of Terms | Project Management Institute \(pmi.org\)](#)
- [PMO and Project Management Dictionary \(project-management.com\)](#)
- [The Complete Glossary of Project Management Terms |Smartsheet](#)
- [Top 40 Project Management Terms and Concepts of 2021 - nTask \(ntaskmanager.com\)](#)

Summary

- Project management is a critical skill set in today's world.
- A project is defined as a temporary endeavor undertaken to create a **unique product, service, or result** (non-routine, one-time effort limited by time, resources, and performance specifications designed to meet customer needs).
- One of the distinguishing characteristics of project management is that it has both a beginning and an end and typically consists of four **phases**: defining, planning, executing, and closing.
- Effective project management begins with selecting and prioritizing projects that support the firm's **mission and strategy**.
- Successful implementation requires both **technical** and **social** skills.
- **Sustainability** in PM: teams, team's project equipment, project execution, and project itself

8 business & sustainability trends that will define 2018

In this trends briefing, you'll find the condensed views and predictions of more than 40 Directors, Fellows, and Senior Associates affiliated to the University of Cambridge Institute for Sustainability Leadership (CISL).

1 Volatility is the new normal
From disruptive technologies to political uncertainty, the future is chaotic and it is here to stay.

2 Sustainability to shape the face of business
Growing public consciousness of sustainability issues and political leadership gaps will increasingly open the way for business to step up to the challenge of sustainability leadership, and either lead, adapt or fail.

3 Enduring loss and damage from extreme weather
After the unprecedented climate events of 2017, vulnerable cities, countries and people will face yet more extreme and disruptive weather events, with the potential to impact business through value chain disruption and stranded assets, and contribute to social unrest.

4 Human versus machine
Growing levels of automation will not only begin to transform the future of business but also the future of work.

5 China and the global shift to the East
The re-election of President Xi Jinping has given China stability in a turbulent world, and has reinforced the state's mandate to address climate change at a time when other world leaders have faltered over sustainability.

6 The end of an era for plastics
Packaging is set to be key battleground in addressing the environmental impacts of business on oceans, land and air.

7 A watershed year for transparency
Anticipating the recommendations for reporting climate-related financial risks from the Taskforce on Climate-Related Financial Disclosures (TCFD), companies such as ExxonMobil have faced investor and public pressure to voluntarily improve risk disclosure. This could fire the gun for greater transparency in other parts of business such as executive pay, gender equality and tax arrangements.

8 Life after coal
The energy revolution is reaching its climax as the switch to renewables and electricity is unstoppable.

Integrate sustainability into your organisation and



Triple Bottom Line Approach (Planet, People, Profit)

- The threat of global climate change has brought sustainable business practices to the forefront. Businesses can no longer simply focus on maximizing profit to the detriment of the environment and society.
- Efforts to reduce carbon imprint and utilize renewable resources are realized through effective project management.
- The impact of this movement toward sustainability can be seen in changes in the objectives and techniques used to complete projects

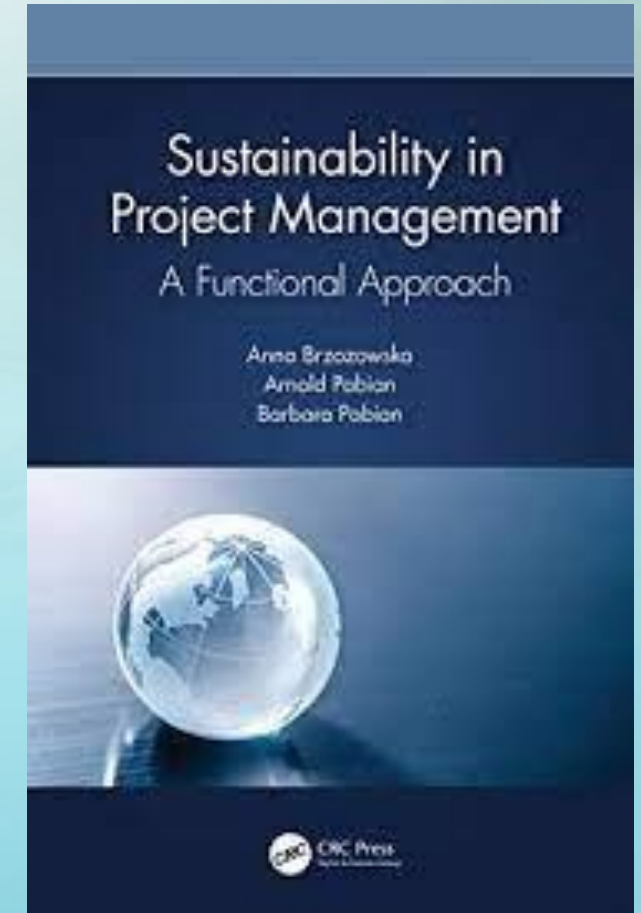


Sustainability in the field of PM

- Sustainability is about how organizations manage financial, social and environmental risks to ensure their business can continue to operate, regardless of obstacles such as:
 - resource shortages,
 - environmental disasters,
 - and social and political events.
- It also relates to green practices and business continuity planning, as well as stakeholder engagement.

Sustainability in Project Activities

- SUSTAINABLE project team
- SUSTAINABLE project team's equipment
- SUSTAINABLE project execution
- SUSTAINABLE projects



Six Transformations to achieve the SDGs



Sachs, J.D., Schmidt-Traub, G., Mazzucato, M. *et al.* Six Transformations to achieve the Sustainable Development Goals. *Nat Sustain* 2, 805–814 (2019). <https://doi.org/10.1038/s41893-019-0352->

What are the key **short term considerations** for policy makers?

- **Eliminating and reducing immediate risks** to human health and the environment – **SAFE AND LIVEABLE ENVIROMENT**
- **More efficient environmental infrastructure** that ensures the supply of safe drinking water, adequate sanitation and appropriate collection, storage and treatment of waste.

What are the key **long term considerations** for policy makers?

- **FUNDAMENTAL TRANSFORMATION** of Ukraine towards a green and net-zero economy (OECD,2022)
- **ENVIRONMENTAL PROCEDURES** regulations, standards and technical rules to ensure that environmental objectives are effectively met, while decreasing barriers to investment and innovation (**financial flows should** contribute to achieving environmental and green objectives).
- **Modernizing the ENVIRONMENTAL INSTITUTIONS** to ensure high administrative capacity to plan and implement sustainable reconstruction efforts, and deliver regulation in a transparent, professional, risk-based and outcomes-focused way.

Which services will be needed? Which projects?

- Developing climate policy, including advice on climate strategies and action plans,
- Supporting scientifically sustainable land use and forest management, green infrastructure reconstruction
- Developing circular economy strategies and action plans
- Developing green energy strategies, solution, curricula
- Developing nature-based solutions for communities
- To be continued

World Business Council on Sustainable Development: Programs and Projects

←

→

↻

🏠

🔒 https://www.wbcsd.org

★

🔍


⚙️

⌵

🔖

👤

⋮



Overview ▾




Vision 2050


Programs & projects ▲

Sector projects ▾

Hubs ▾

Media



Search 

Circular Economy

Circular Plastics & Packaging

Factor10

The Alliance to End Plastic Waste

Cities & Mobility

City-Business Collaboration

Commuting Behavior Change

Digitalization and Data in Urban Mobility

Mobility Decarbonization

Transforming the Built Environment

Climate & Energy

Climate Action and Policy

Natural Climate Solutions

New Energy Solutions

REscale

SBT4utilities

SOS 1.5

Food & Nature

FReSH

Global Agribusiness Action on Equitable Livelihoods

Global water solutions

Nature Action

Policy & Advocacy

Scaling Positive Agriculture

Soft Commodities Forum

People & Society

Future of Work

Healthy people, healthy business

Human Rights

SDG Action & Policy

SDG Sector Roadmaps

Tackling Inequality: Setting the business agenda

Redefining Value


CFO Network


Reporting matters

Shaping sustainable finance policy

Stakeholder capitalism

TCFD Preparer Forums

PAGE INDEX 





Forest Solutions Group



Be part of the solution
Choose sustainable forest products.

Our Forest Solutions Group (FSG) is the global platform where leading business in the forest products sector build and share solutions to sustainable development. FSG's mission is to grow an inclusive circular bioeconomy that is rooted in thriving working forests.

The **Forest Sector SDG Roadmap** released in 2019, provides FSG's framework for action. As a sign of shared commitment and as a condition of FSG membership, FSG members endorse and adhere to a set of **Membership Principles & Responsibilities**, and report annually on **Key Performance Indicators (KPIs)** to track progress towards



Enter your email address

SUBSCRIBE

ABOUT US

PARTNERS

EN ▾



UKRAINE EXPLAINED

RUSSIAN AGGRESSION

REFORMS

INFOWATCH

VIDEOS

PODCASTS

OPINIONS

BOOKS

SEARCH



TOP 5 Green Projects and Trends in Ukraine

September 27, 2019

As the host country for the notoriously deserted city of Chernobyl, and having its shores washed with the Black Sea that has been recognized as Europe's dirtiest sea, Ukraine has hardly been making ecology its cornerstone priority. Whether Ukraine's brand new President is going to change that remains a pending question, we decided to paint a broad landscape of the biggest and most interesting green projects and trends that exist in Ukraine these days.

GREEN POST-WAR RECONSTRUCTION OF UKRAINE: VISION AND MODELS

ЗЕЛЕНЕ ПОВОЄННЕ ВІДНОВЛЕННЯ УКРАЇНИ: ВІЗІЯ ТА МОДЕЛІ

Аналітична записка
Серпень 2022 р.



ПРОЕКТ ФІНАНСУЄТЬСЯ ЄВРОПЕЙСЬКИМ СОЮЗОМ



Ресурсно-аналітичний центр
"СУСПІЛЬСТВО І ДОВКІЛЛЯ"



Асоціація
«Енергоефективні
міста України»



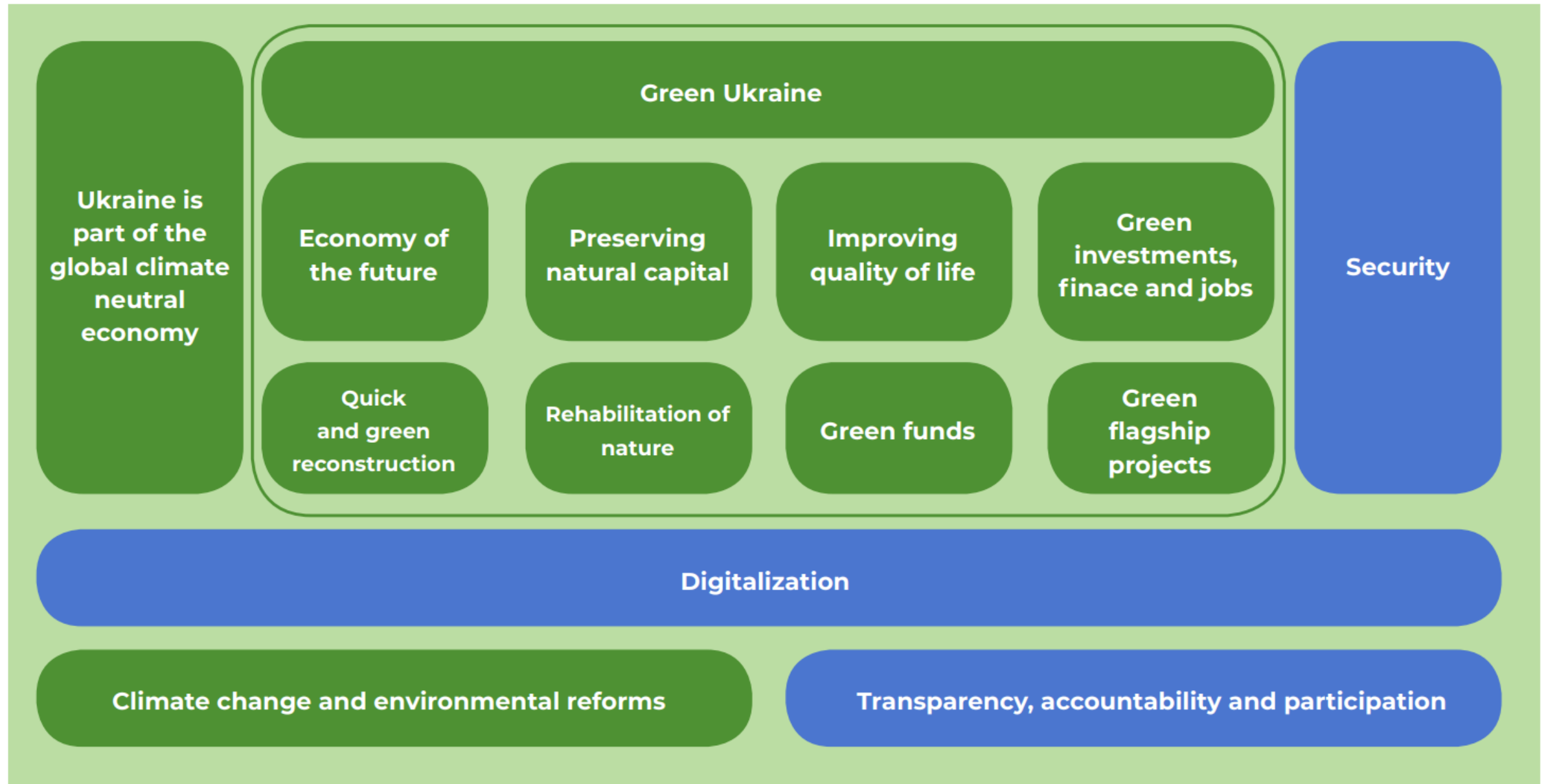
УКРАЇНСЬКА
АКАДЕМІЯ
ЛІДЕРСТВА



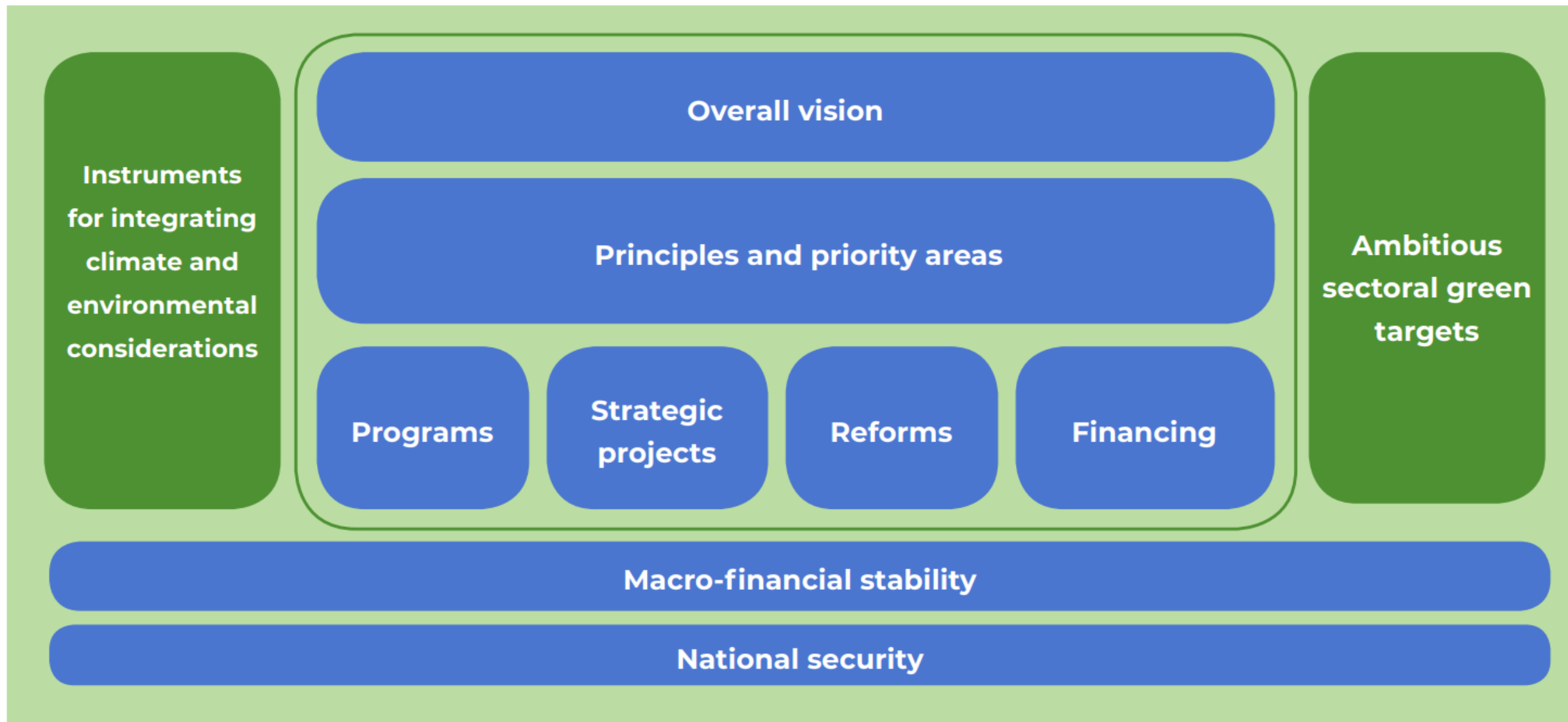
ЖІНОЧИЙ
ЕНЕРГОКЛУБ
УКРАЇНИ



Architecture of the ambitious model of green reconstruction of Ukraine



Architecture of the pragmatic model of green reconstruction of Ukraine



We make Project Management Sustainable

Our Project Managers are changing the world one project at a time.

[Learn More →](#)

Get Sustainable tools for Consultants

GPM 360 provides you with a toolkit that will wow your clients.

[Learn More →](#)



The GPM P5 Standard for Sustainability in Project Management

Version 2.0



List of Figures.....iv

1 Introduction.....1

1.1 Today's Challenges	1
1.2 So what does this have to do with project management?.....	1
1.3 The Evolution of Project Management Focus.....	2
1.4 The P5 Ontology.....	3
1.5 The Sustainable Development Goals.....	4
1.6 Professionalization in Project Management.....	5
1.7 Programs and Portfolios	5

2 Product and Process Impacts6

2.1 Product Impacts	6
2.1.1 Lifespan of the Product.....	7
2.1.2 Servicing of the Product	7
2.2 Process (Project Management) Impacts.....	8
2.2.1 Effectiveness of Project Processes	9
2.2.2 Efficiency of Project Processes	9
2.2.3 Fairness of Project Processes	10

3 People (Social) Impacts.....11

3.1 Labor Practices and Decent Work.....	11
3.1.1 Employment and Staffing.....	12
3.1.2 Labor/Management Relations	12
3.1.3 Project Health and Safety	13
3.1.4 Training and Education	13
3.1.5 Organizational Learning	14
3.1.6 Diversity and Equal Opportunity	14
3.1.7 Local Competence Development	14
3.2 Society and Customers.....	15
3.2.1 Community Support.....	15
3.2.2 Public Policy Compliance.....	15