UNITED NATIONS DEVELOPMENT PROGRAMME

URBAN LEARNING CENTER

Funding and Finance for Municipalities

A Hands-on Guidance to Improve Project Funding

ARUP

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TAL TECH

MAYORS FOR ECONOMIC GROWTH

Funded by the European Union

UNDP

Funding and Finance for Municipalities

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Cover Photo
AI generated through Midjourney, by Valentin Croitoru

Design
Natan Aquino

Contact Information
Elina Jarvela, a.i. Regional Project Manager, elina.jarvela@undp.org

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MAYORS FOR ECONOMIC GROWTH

Funding and Finance for Municipalities

Overview of course

Module 1	Understanding the context and the challenges
Module 2	Spotlight on improved project selection
Module 3	Spotlight on improving local revenue generation
Module 4	Spotlight on successful delivery of a project (funding absorption)

Introduction to the Course

Municipalities are crucial in driving local development, delivering essential services, and fostering community well-being. However, despite their significance, many municipalities in Eastern Partnership countries (EaP) – made up of Armenia, Azerbaijan, Georgia, Moldova, and Ukraine – face challenges in accessing the funding and finance needed to deliver infrastructure projects and sustainable development initiatives. The guidance will provide participants with an overview of the funding and finance landscape for municipalities, focusing on enabling conditions for attracting finance. It will also cover practical ways municipalities can improve these conditions at a local level for their projects.

The course aims to address and respond to the challenges faced by municipalities in accessing the funding and finance needed to deliver infrastructure projects and sustainable development initiatives.

The course will address the challenges of main revenue sources for municipalities, common bottlenecks to accessing funding and finance at a local level, and provide a foreseen solution, better understanding of the enabling conditions to improve access to funding and finance at the municipality level and identification of practical ways to do so.

What is this course about?

This course provides an overview of different types of revenue sources available to municipalities, such as local taxes, fees, grants, and external funding from donors or investors.

The course provides a range of opportunities to learn; from bite-sized content to interactive quizzes and activities to help you to apply these new learnings to your context.

What can I expect to gain from the course?

A better understanding of the enabling conditions to improve access to funding and finance at the municipality level and identification of practical ways to do so.

Learning objectives

- Understand the principles and concepts of municipal finance,
- Analyze different sources of municipal revenue,
- Identify key bottlenecks in accessing funding and finance,
- Explore tools and techniques to access more funding,
- Gain knowledge from real-world municipal finance examples, using case studies and practical examples of municipal finance issues and best practices.
- Knowledge testing:
- A workshop exercise,
- A quiz to test your understanding.

It is advised that the information provided in this guidance is considered part of the development of the Pathways for Economic Growth (P4EG) within your town or city.

How is this course structured?

The deep-dive course on Funding and Finance for municipalities consists of four modules; each module is designed to complement and extend the previous one.

The **first module** "Understanding the Context and the Challenges, will unpack the municipalities' role in mobilizing funds and available instruments to mobilize funds and resources.

The **second module** "Spotlight on Improved Project Selection" will unpack guidance on how municipalities can improve the viability of their projects and align them with investor interests.

The **third module** "Spotlight on Improving Local Revenue Generation" will unpack a few key instruments and best practices to enhance local revenue generation.

The **fourth module** "Spotlight on Successful Delivery of a Project (Funding Absorption)" will unpack a few tools and approaches that can help you achieve project delivery within budget and time.

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Module 1

Understanding the Context and the Challenges

Module 1

Understanding the Context and the Challenges

What will this module cover?

The module equips municipalities with the knowledge to understand their role in resource mobilization, introduces a variety of funding instruments, and addresses challenges in securing sustainable finance. It also offers practical guidance on improving local conditions to make resource mobilization more effective.

Learning Objectives

On completion of the module, you will be able to:

- Understand the role of municipalities in resource mobilization
- Identify key financial instruments for resource mobilization and the relevant instruments for your municipality
- Address challenges in accessing funds

1.1 What role can municipalities play in mobilizing resources and which instruments are available to mobilize sustainable funding and finance?

Globally, municipalities play a very important role in the delivery of important public services and meeting the Sustainable Development Goals (SDGs). However, such activities come at an expense. Across municipalities, accessing sufficient resources and funding is a persistent and growing challenge.

1.2 What roles can municipalities play in mobilizing resources?

There are some key roles that municipalities can play to help to mobilize resources and funding:

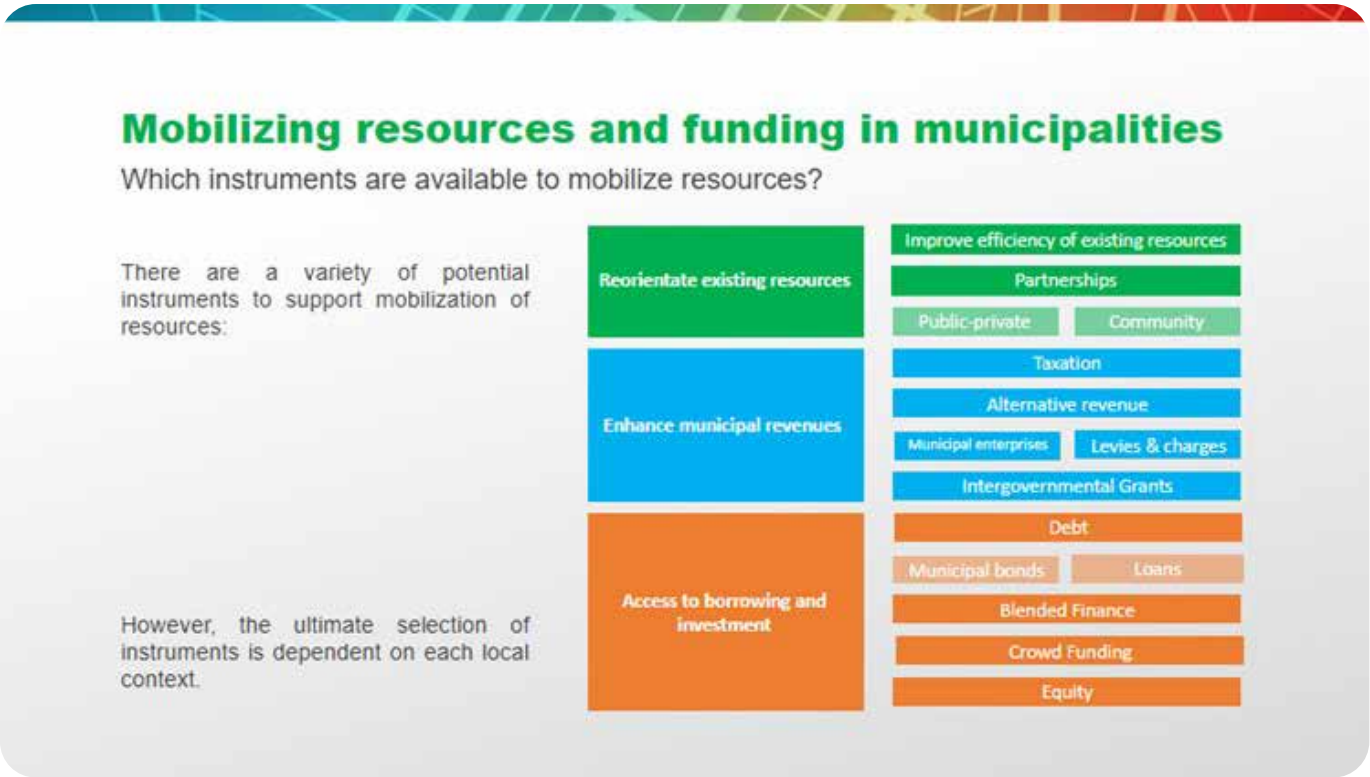
- **Reorientate existing resources:** Municipalities can make the most of existing resources by exploring how services can be delivered and prioritizing upgrades efficiency of services to reduce costs, such as improvements to energy efficiency.
- **Enhance municipal revenues:** Municipalities can increase their revenues through both tax and non-tax sources, as well as receive revenue from Central Government sources.
- **Access to borrowing and investment:** Under the right situations, municipalities can also mobilize resources through borrowing and supporting the case for investment in the local area.

1.3 Which instruments are available to mobilize resources and funding?

There are a variety of potential instruments that can support the access of resources and funding. However, the ultimate selection of instruments depends on each local context.

Key sources of borrowing and investment include those set out in Table 1 below.

Category	Subcategory	Description	Case Studies
Source of Finance	National / or subnational Finance	**Government Budgets:** Example: Public funds for climate projects **Sovereign Bonds:** Bonds for climate-related projects at the subnational level	In Tanzania, UNCDF is providing technical support to the Tanga Urban Water Authority and Sanitation (UWASA) to issue the first municipal bond to be launched on the Dar es Salaam stock market.
	International Finance	**MDB (Multilateral bank)s:** Loans and grants from institutions like the World Bank **Climate Funds:** Grants and loans from funds like GCF **Bilateral Aid:** Direct financial assistance from other countries	The EBRD's Green Cities Programme supports cities in understanding investment needs and priorities and involves a range of key stake-holders in this process, which in turn helps the Bank finance cities' climate projects later on and also secure co-financing by the GCF.
	Private Finance	**Private Investors:** Investments from pension funds, and insurance companies **Corporate Finance:** Investments from private companies	Greater Manchester Pension Fund (public sector pension fund) has built significant capacity for place-based investing across different asset classes including energy.
	Public-Private Partnerships (PPPs)	**Joint Financing:** Combined public and private resources	Coventry in the UK formed a 15-year Strategic Energy Partnership joint venture with the energy company E.ON to provide significant long-term investment to upgrade energy infrastructure.
Financial Instruments	Debt Instruments	**Concessional Loans:** Low-interest loans (from MDBs, or corporates) **Green Bonds:** Bonds for sustainable projects (could be issued by banks) **Sovereign Bonds:** Bonds for climate infrastructure (governments)	Concession debt from MDBs is generally not a single mechanism or type of financial support but comprises a range of below-market-rate products. EBRD provides a Credit line facility through local financial institutions for projects in private and public sectors in regional areas through the Western Balkan Regional Energy Efficiency Programme
	Equity Instruments	**Direct Equity Investments:** Equity stakes in climate projects (could be Corporate, or MDBs private sector investment arms such as the IFC)	The Subnational Climate Fund (SCF) is considering a USD 45 million investment in a Utility-Scale Solar in Albania (to serve as a serve as capital and funding partner).
	Grants and Subsidies	**International Grants:** Grants for climate projects	M4EG Facility provides direct support to selected cities in Ukraine and Moldova. The funding has two lots: 1) Response & Immediate Recovery, aimed at supporting the immediate needs of people affected by the war, and 2) Renewal & Anticipation, aimed at supporting local authorities to get on track with their sustainable development pathways with a funding range EUR 30,000-50,000 (no co-financing required) and EUR 70,000 – 100,000 (at least 20% co-financing required) respectively.



Some available resources that provide a useful overview of the range of instruments that are available to municipalities when mobilizing resources, reflect on some associated challenges, and provide existing sources of funding as well as successful case studies are:

UN Habitat's thematic paper on "The challenge of local government financing in developing countries" (2015). The report presents that Cities are assets that can and should be leveraged to create wealth and economic opportunities for all. To do so it emphasizes the need for good urban planning that supports urban compactness accompanied by financial and regulatory strategies for implementation and strategic funding mechanisms. The report also identifies successful governance mechanisms for efficient and equitable provision of public services in metropolitan areas of developing countries, and shares experiences and methods for making public service provision more viable in peri-urban areas of large cities and in smaller urban centers of these countries.

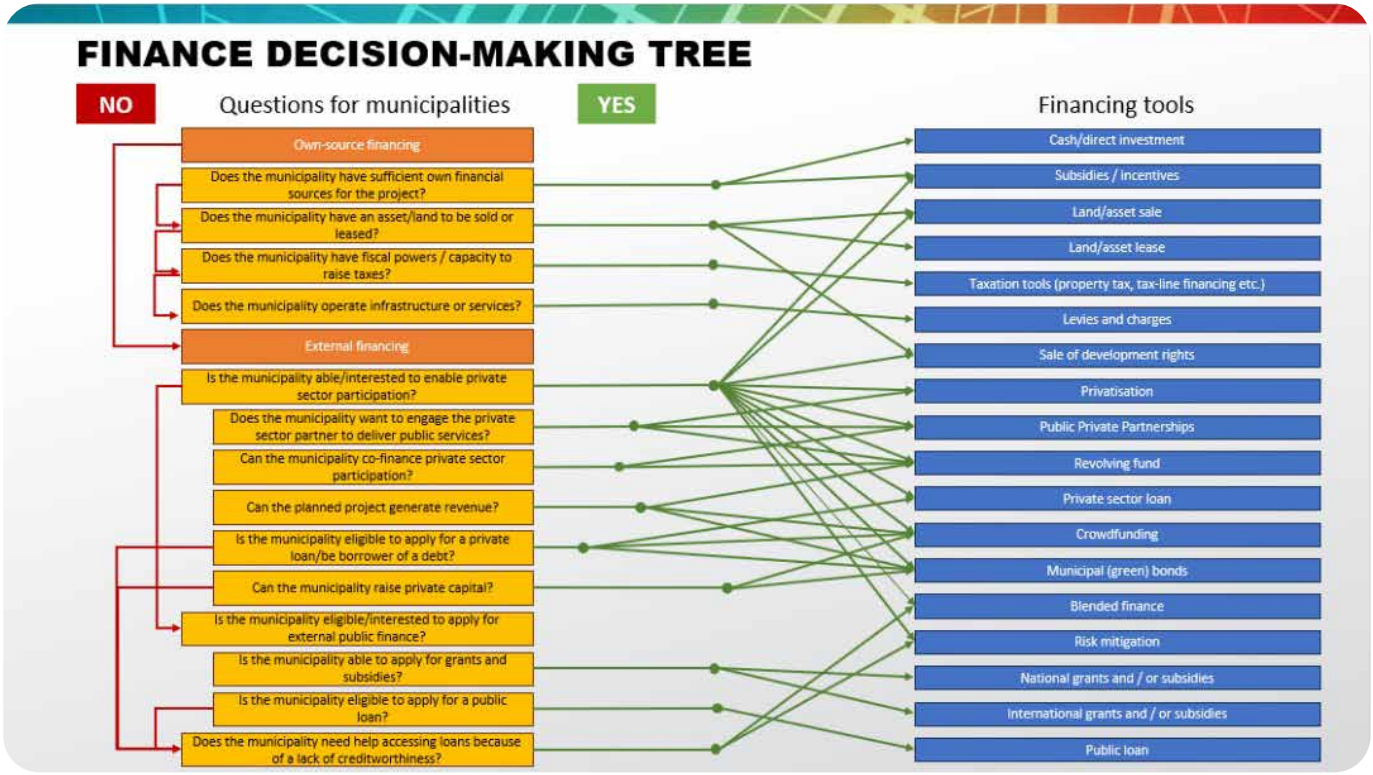
Module 7: Mobilizing Funding and Resources from the "Foundation for Future Readiness" course, covers how to mobilize funding and resources for your municipality and introduces a suite of approaches. The module describes the trends and the landscape of green finance and highlights a range of instruments.

Important: If you haven't completed this course before this module, please do so by following this link.

1.4 What are the most relevant instruments for my municipality?

The ultimate availability of each instrument for a given municipality is dependent on the specific local and national contexts and legislation. It is important to explore which instruments are most appropriate for the local context of your municipality.

The simplified finance decision-making tree below can guide you through a series of questions that will help you consider different financing tools available to municipalities. Depending on your answers you should start having a clearer view about your ability to access corresponding tools.



The Financial Instruments Toolkit developed by the Cities Climate Finance Leadership Alliance also provides an interactive tool that showcases potential financial instruments, highlighting case studies and demonstrating practical applications of instruments in the field. You can apply different filters such as city size, project sector, funding sources, or climate objectives to learn more about existing applicable instruments.

To further assist municipalities in identifying the most relevant financial instruments for nature-related projects, the BIOFIN workbook suggests a two-step screening process: rapid screening and in-depth screening. The rapid screening process focuses on quickly identifying the most promising and realistic finance solutions, excluding those that are not viable.

This step helps municipalities to prioritize options that have the highest potential for implementation and impact. Following this, the in-depth screening process involves a more detailed evaluation of the shortlisted solutions, considering various criteria to ensure their feasibility and alignment with local contexts.

1.5 Challenges in accessing funding and mobilizing resources

Even when municipalities can identify relevant theoretical tools to fund their projects, their ability to effectively use these depends on a range of enabling conditions.

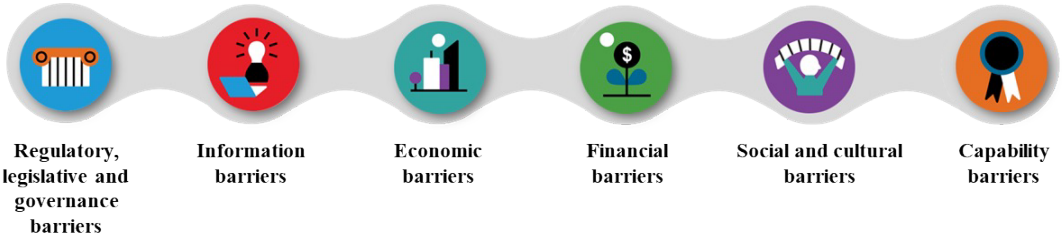
Enabling conditions are the local and national factors such as:

- **Financial capacity,**
- **Institutional environment,**
- **Clear guidance and processes** for identifying pipelines and selecting the projects most suitable for the local context,
- **Local capability** that makes it possible for municipalities to effectively access these revenue sources.

As a municipality, it's essential to understand the enabling conditions and potential local barriers to identify the scope of possibilities available and determine the best use of your resources.

Common barriers to these enabling conditions for funding and finance in EaP municipalities can be grouped into six broad categories:

1. **Regulatory, legislative, and governance barriers:** fiscal settings, borrowing rules, scope of activities.
2. **Information barriers:** poor communication between municipalities and funders hinders investment.
3. **Economic barriers:** project size and low return on investment make them unattractive to investors.
4. **Financial barriers:** municipalities lack access to suitable financial tools for their projects. Project financing doesn't align with investor requirements.
5. **Social and Cultural barriers:** resistance to change and risk aversion.
6. **Capability Barriers:** lack of skills and resources to effectively raise, manage and deliver projects and finance.



Municipalities' power of influence over these barriers often varies depending on their size, capability, and national context. This module focuses on selected practical fixes municipalities can make which are usually within their remit.

More information on these barriers and specificities identified in the EaP context can be found in the UNDP report – Funding and Finance for Municipalities in the EaP.

The report explores the challenges municipalities face in securing funding for local development and infrastructure projects. It focuses on the Mayors for Economic Growth (M4EG) initiative, a collaboration between the EU and UNDP, which supports local governments in Eastern Partnership (EaP) countries (Armenia, Azerbaijan, Georgia, Moldova, and Ukraine). The report proposes solutions to unlock additional funding.

1.6 Focus on improving enabling conditions at the municipality level

Enabling conditions at the municipality level refers to the factors that make it easier for towns and cities to secure funding and financing for their projects. In the previously listed barriers, you will have identified some that are independent of your powers such as national fiscal regulation or minimal project size for investors.

On the other hand, you may be able to directly influence other enabling conditions at the local level. We have identified four of these which can apply to most municipalities regardless of size or regulatory context:

1. **Improved project design.**
2. **Improved local revenue generation.**
3. **Better project funding management.**
4. **Better Status Quo assessment of existing financial flows** and regulatory/legal requirements for revenue generation and financing.

To equip you with a broader understanding of the above enabling conditions this learning module will address them in the following way:

5. **Improved project design:** emphasize the importance of well-defined projects with clear goals, budgets, and implementation strategies to attract investors.
6. **Improved local revenue generation:** increase your awareness of possible revenue-generating mechanisms that you can implement locally.
7. **Better project funding management:** go through general principles of sound project and budget management practices, to keep your projects on track and within budgetary limits once you have accessed the funds. Better budget management can also allow you to create a track record and build transparency making it easier to attract future investment.

1.7 Test your learning

Municipalities rely on various revenue streams to function and develop projects. Which of the following is NOT a common source of income for municipalities?

a) Property taxes levied on residents (e.g. council tax)

b) Grants from the national government

c) User fees charged for specific services (e.g., parking tickets)

d) Loans from private investors and international funding institutions

e) Spending by tourists coming to visit the town

Incorrect answer: e) Spending by tourists – this is a source of income for local businesses, which can in some cases indirectly benefit the municipality through increased taxes, but should not be considered as a revenue stream.

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Module 2

Spotlight on Improved Project Selection

Module 2

Spotlight on Improved Project Selection

What will this module cover?

This module equips municipalities with the tools to design viable projects that align with investor priorities, enhancing their ability to secure funding. By using project viability checklists and understanding funder requirements, municipalities can improve project success rates and attract sustainable financing.

Learning Objectives

On completion of the module, you will be able to:

- Understand how to design and select municipal projects that address local priorities while also being attractive to investors and funders.
- Identify and integrate key investor or donor requirements, such as financial returns, social impact, and sustainability, into project proposals.
- Gain insights from practical examples, such as Ukraine's DREAM platform, to enhance project transparency, management, and accountability.

2.2 Project design and selection of projects

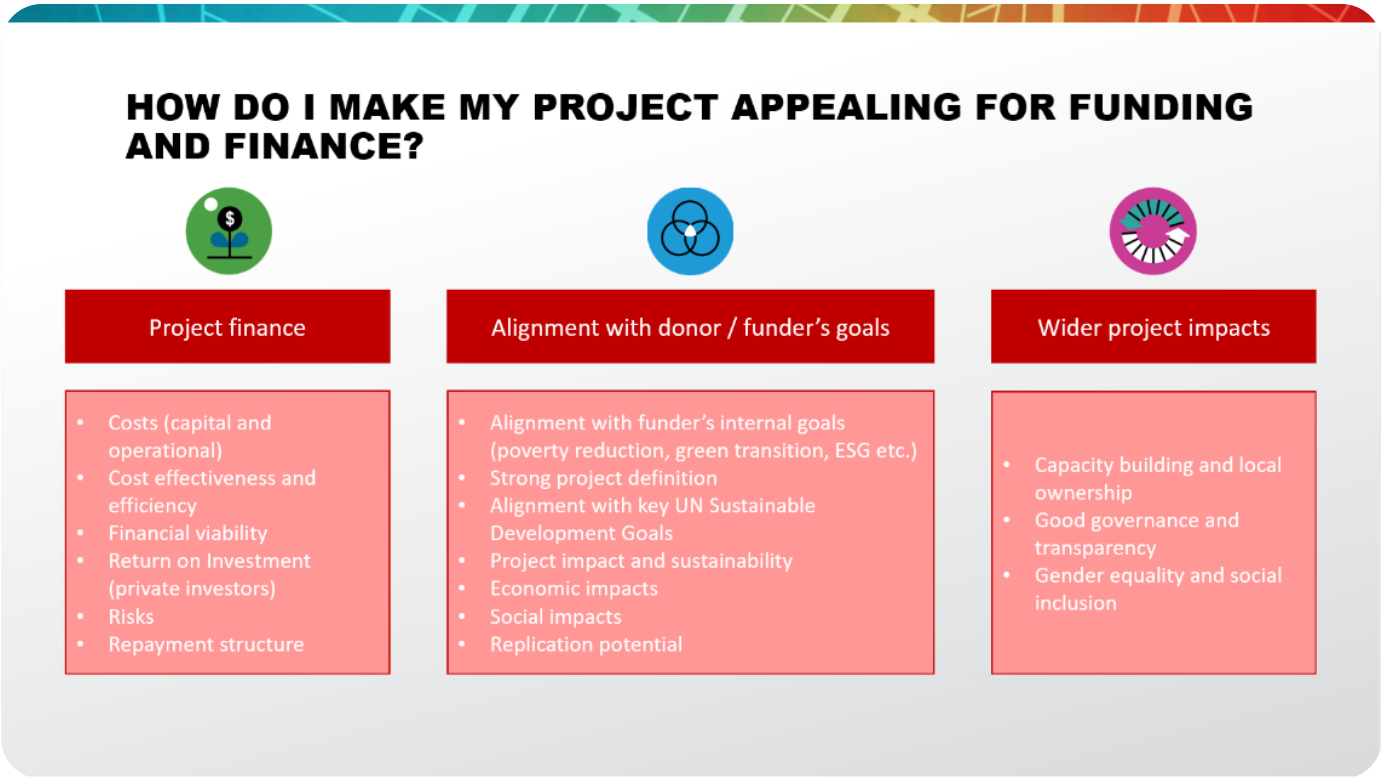
The typical barriers raised by International Financial Institutions (IFIs) and private donors when prompted about municipal projects are that projects lack compelling investment cases (financial barrier) and often municipalities fail to demonstrate sound financial health and capability to manage funding (information and capability barriers). Additionally, in the case of non-profitable projects, projects often fail to demonstrate delivery of wider benefits (economic and information barriers) (e.g. contributing to SDGs, green transition, or adding social value).

The two key questions you need to be able to answer when looking for external funding are therefore:

- **How do I make my project appealing for funding?**

- **How do I make my municipality appealing to funders?**

Note that the scope of funders' requirements varies depending on internal priorities and objectives, as well as on the typology of the funder and investment type, e.g., a loan from a private investor will differ from grand funding from international donors. However, overarching principles are set out below. Appealing project for funding and finance:



Municipalities' attractiveness to funders will depend on the following:

2.2 Foreseen solution: alignment of projects to investor's indicators of interest

To optimize the funding received, your projects should always try to align with these requirements, taking into account the funder's internal specificities as well.
An attractive business case for a municipality project to secure funding from investors and International Financial Institutions (IFIs) hinges on demonstrating both financial viability and positive impact. Here are key elements to be able to demonstrate for each of your projects seeking external funding:

Strong Project Need and Impact:

- **Clearly define the problem the project addresses:** Identify the issue the project aims to solve, outlining the impact on citizens and the municipality.
- **Quantify the benefits:** Demonstrate measurable improvements in areas like public health, job creation, economic growth, or environmental sustainability.

Alignment with Investor/ IFI Priorities:

- **Consider investor/IFI focus areas:** Research the specific priorities of your target investors or IFIs and tailor your case to highlight how the project aligns with their goals (e.g., sustainable development, social impact).
- **Sustainable practices:** Showcase how the project incorporates environmental and social sustainability considerations.
- **Sustainable Development Goals:** Demonstrate how your project objectives and outcomes align with selected relevant SDGs.

Financial Viability:

- **Solid financial projections:** Present realistic forecasts for project costs, revenue streams (if applicable), and return on investment (ROI) for investors.
- **Financial risk assessment:** Identify potential financial risks and outline mitigation strategies to address them.
- **Funding structure:** Clearly define the funding mix, including municipal contribution, debt financing, and equity investment.
- **Municipal finance:** Demonstrate the municipality's ability to meet short-term financial obligations (e.g. debt service etc.)

Project Managemen and Governance:

- **Clear project timeline and milestones:** Outline a realistic timeline for project completion with defined milestones for monitoring progress.
- **Experienced project team:** Demonstrate a competent team with the expertise to manage the project effectively.
- **Transparent governance framework:** Ensure a transparent decision-making process with clear accountability measures.

Additional Considerations:

- **Market context:** Provide context about the local and regional market environment, highlighting potential opportunities and threats.
- **Stakeholder engagement:** Demonstrate how you have engaged with local stakeholders impacted by the project and show buy-in.
- **Legal and regulatory framework:** Outline a clear legal and regulatory framework that governs the project and protects investor interests.

2.3 Project viability checklist

A checklist developed by the Global Infrastructure Basel (GIB) Foundation provides additional guidance and checks of Yes/No questions to evaluate sustainable projects' maturity and readiness. Some of the key steps are presented below:

Sustainability and Resilience:

• Conduct environmental and social impact assessments.

• Plan for resilience against natural and societal shocks.

• Ensure sustainable supply chains.

Project Preparation:

• Establish clear project rationale and scope.

• Assess commercial viability, long-term affordability, and deliverability.

Project Structuring and Bankability:

• Ensure stable cash flow and financial modeling.

• Assess political risks and insurance needs.

Finance:

• Identify and assess suitable financing sources.

• Prepare for due diligence and financial close.

Access the full checklist here: Guidance for sustainable infrastructure development and finance.

Below is a **list of key indicators** in Table 2 that can be used to evidence the strength and benefits of your projects in meeting the criteria above:

Note: In addition to these, you should always check what types of requirements funders have as a first step to developing your funding application.

Metric	Description
Project Impact	Measured by specific metrics aligned with the donor's goals. For example, if the goal is poverty reduction, KPIs might include: • The percentage of project beneficiaries lifted above the poverty line. • Increase in average income within the target population. • Percentage of project beneficiaries accessing new services or resources. • Alignment with relevant SDGs quantified objectives.
Impact on employment (short-term)	• Number of jobs created or retained. • Number of skilled jobs. • Number of jobs available to the local population; number of opportunities for minority groups (incl. women).
Impact on economic activity (short-term)	• Local procurement: Track the percentage of materials and services sourced from local businesses. • Economic development: Measure the project's impact on local businesses, property values, or tax revenue. • Innovation: Track the use of innovative technologies or sustainable practices that can benefit the community.
Social impacts	• A number of residents trained. • Labour participation of women, people with disability, or excluded groups. • Improved public health: Measure improvements in air quality, access to green spaces, or public safety.
Financial viability	• Project costs and cost-effectiveness (cost per beneficiary of the project). • Revenues. • Return on Investment (ROI): (final value of investment – Initial value of investment) / Cost of Investment. • Risk-Return Ratio: compares the ROI to the potential risk involved in the project.
Project Completion Rate on Time and Budget	Measures the municipality's track record of delivering projects within planned timelines and budgets. • Percentage of projects completed on time and budget.
Municipal finance	Debt Service Coverage Ratio: Assesses the municipality's ability to meet its debt obligations. • Net Operating Income / Annual Debt Service. Liquidity ratio: measures the municipality's capacity to meet short-term financial obligations. • Current Assets / Current Liabilities.
Local Stakeholder Participation	Measured by the level of involvement from local communities in project planning and implementation. This could involve: • Number of community meetings held during project development. • Percentage of project budget allocated to local businesses or contractors.
Governance and Transparency	Measured by the municipality's adherence to sound financial practices and open communication. This could involve: • Availability of public financial reports and audits. • Citizen satisfaction ratings with municipal transparency.
Sustainability	• Energy consumption: Track reductions in energy use for buildings, infrastructure, or municipal operations. • Renewable energy integration: Measure the percentage of energy derived from renewable sources. • Water conservation: Monitor water use reduction in public facilities and encourage sustainable practices. • Waste reduction and diversion: Track the amount of waste diverted from landfills through recycling, composting, or reuse. • Greenhouse gas emissions: Measure and aim to reduce greenhouse gas emissions associated with the project (construction and operation).

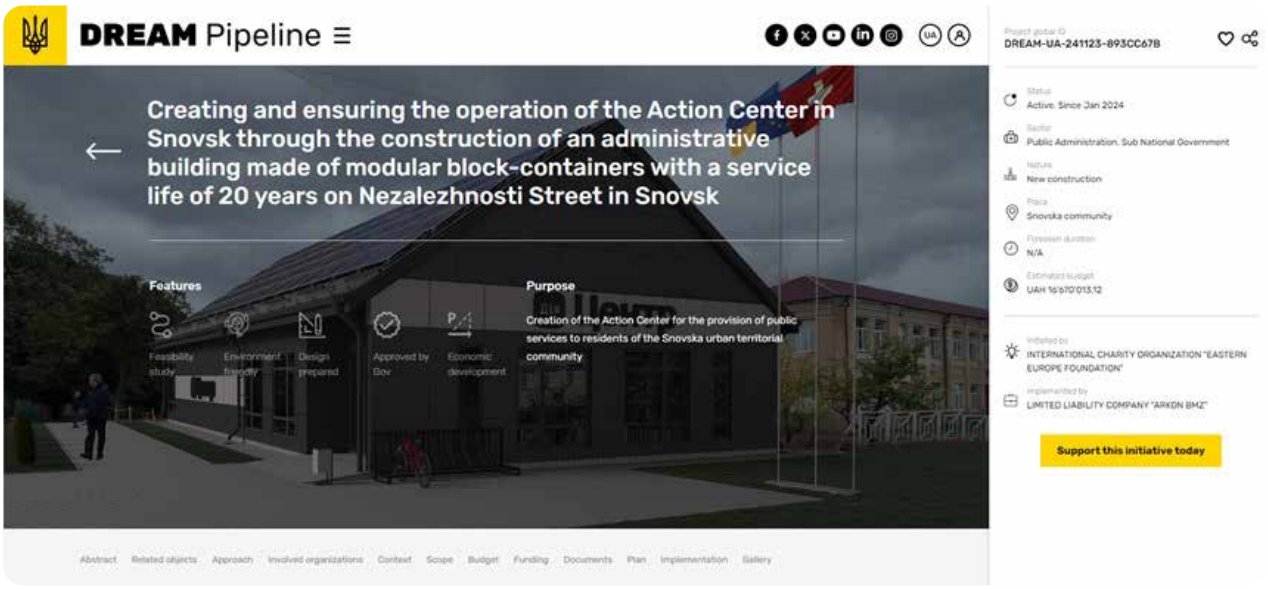
2.4 Example in practice: Ukraine's Digital Restoration Ecosystem for Accountable Management (DREAM) platform

DREAM collects, organizes, and publishes open data across all stages of reconstruction projects in real time, implementing the highest standards of transparency and accountability. Anyone, anywhere, can monitor the effectiveness and efficiency of project delivery, and use these insights to mitigate risks, conduct accurate reporting, and improve overall project performance.

The platform provides a standard project profile with key transparent information about each project that requires funding:

- Project abstract
- Dashboard: priority index, financial coverage (and need), risk index, project assessment score
- Technical approach
- Project parties and partners
- Context
- Budget and funding need
- Project plan
- Implementation status and processes

The platform improves the visibility of projects and improves project appeal to investors by allowing them to rapidly assess needs, contexts, and risks, match projects with their investment goals, and share funding between several organizations.



Source: Dream - https://dream.gov.ua/

2.5 Focus on matching specific funder requirements

Securing project funding is often vital for bringing your vision to life. However, this process necessitates a strategic alignment between your project's objectives and the priorities of potential funders. Striking this balance can be challenging, but careful consideration can mitigate risks and maximize the likelihood of success.

Key challenges in aligning objectives:

- **Project identity vs. Funder requirements:** the primary challenge lies in determining the extent to which your project can accommodate the funder's objectives without compromising its core purpose. This requires a nuanced approach - insufficient adaptation risks missing funding opportunities, while excessive changes may dilute the project's unique character.

- **Optimizing for multiple funders:** certain projects may benefit from a phased approach or segmentation into distinct initiatives that better align with different funding opportunities. This strategy requires careful analysis to ensure each component remains cohesive with the overall project vision.

Potential risks of misalignment:

- **Changing project focus:** particularly during periods of limited funding availability, organizations may be tempted to accept any available grant, even if it necessitates significant project alterations. This approach can lead to a disconnect from the project's original purpose and potentially fail to address the city's identified needs.

- **Incoherence and application rejection:** excessive modifications to project design can create inconsistencies within the funding application. These inconsistencies raise red flags for reviewers and significantly reduce the application's competitiveness.

- **Wasted resources:** investing time and effort into applications with a poor fit due to misalignment carries a substantial risk of wasted resources.

Strategies for effective project-funder alignment:

- **Collaborative assessment**: when considering project adjustments, involve key stakeholders, particularly those who designed the project and its cost structure. Their expertise is invaluable in understanding how changes in one area might impact the project's logic model, intervention rationale, and overall effectiveness.

- **Open communication with funders:** if there are any uncertainties regarding the project's suitability for a specific grant program, proactive communication with the funder is highly recommended. This demonstrates your organization's commitment and can be viewed favorably. Be prepared - whoever contacts the funder should possess a thorough understanding of the project and be able to deliver a concise summary or compelling pitch.

While strategic adjustments may be necessary, complete project revisions driven by the aim to secure funding are not advisable. A well-aligned project proposal demonstrates not only the project's merits but also your organization's ability to understand and address the priorities of potential funders. By carefully navigating this step, you can significantly increase your chances of securing funding that fuels project success and fosters positive societal impact.

Additional resources:

Global Infrastructure Basel (GIB) Foundation - Guidance Checklists: Preparation of Sustainable and Resilient Infrastructure Projects

World Bank: Self-Assessment City Creditworthiness Tool

CRISIL: Rating criteria for municipal and urban local bodies

URBAN LEDS: Financing Readiness (list of key questions)

URBACT: Funder requirements pre-submission appraisal (checklist)

The World Bank produced a sustainability checklist for economic interventions which can serve as a reference.

2.6 Test your learning

Donors, such as international organizations or NGOs, consider various factors when deciding to fund municipal projects. Which of the following is the LEAST likely to be a major criterion for a donor?

a) Alignment with the donor's mission and goals (e.g., poverty reduction)

b) Potential for the project to generate a financial return for the donor

c) Sustainability of the project's benefits for the community

d) Track record of the municipality in managing finances responsibly

Incorrect answer: b) Potential for the project to generate a financial return for the donor

Explanation: Donors typically provide funding for social good, not financial gain. They prioritize projects that align with their mission, are sustainable, and demonstrate responsible financial management by the municipality.

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Module 3

Spotlight on Improved Local Revenue Generation

Module 3

Spotlight on Improved Local Revenue Generation

What will this module cover?

In this module, we focus on a few key instruments and best practices to enhance local revenue generation. We will primarily focus on the definition of these instruments, key benefits, and main challenges as well as necessary enabling factors.

Learning Objectives

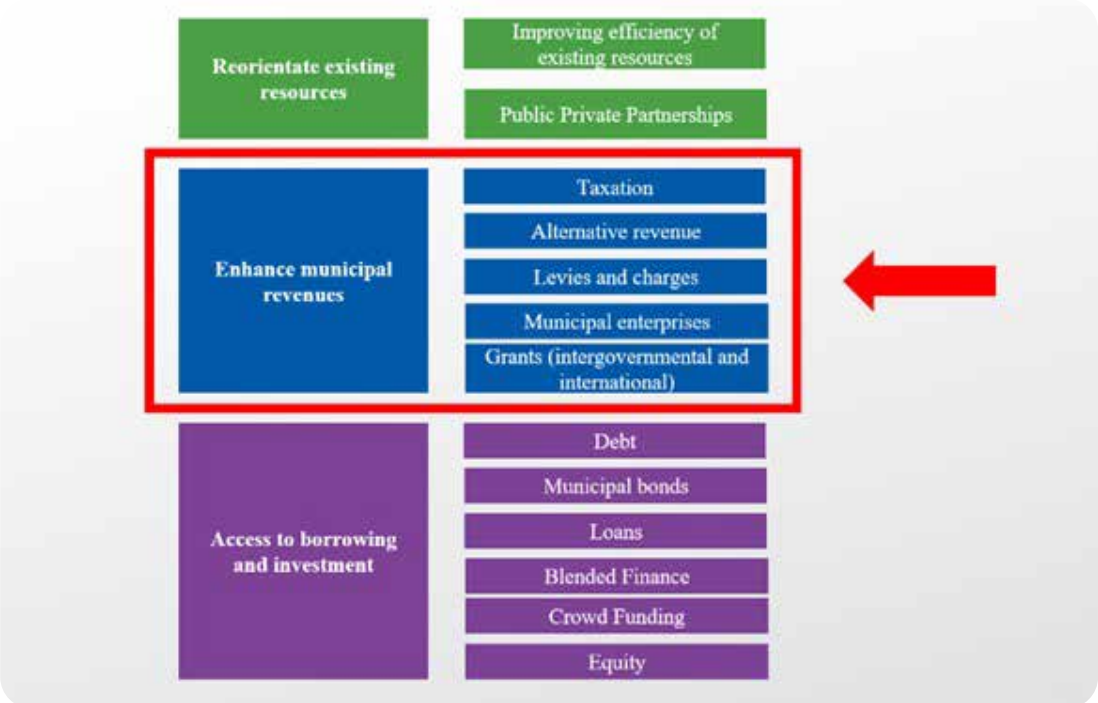
On completion of the module, you will be able to:

- Develop and capture revenue systems and navigate standard budgetary processes
- Improve financial literacy across a range of areas focused on self-generated revenues

3.1 Guidance in developing and capturing revenue systems and navigating standard budgetary processes.

As a municipality, you may not always wish or have the internal capability to access external funding. Instead, you may wish to take some actions to improve self-generated revenues which are directly within your scope of competence.

Some of the standard self-generated revenue streams that you can use are summarized in the chart below:



3.2 Foreseen solution: improve financial literacy across a range of areas focused on self-generated revenues

Municipalities can take several actions on their own to increase their revenues such as introducing fees, property taxes through land value capture, vehicle and transportation taxes, local business taxes, excises, and sales taxes. The following mechanisms are just a few of the existing tools that you can use. These vary in complexity and their implementation will depend on your fiscal context. Good financial practice is usually to have a mixture of these tools to increase self-generated revenues.

3.2.1 Municipality-owned land/asset lease

Definition

Many local governments are “cash poor, land rich”. They have limited fiscal autonomy and/or small budgets. Nevertheless, they control substantial holdings of land and built-up properties that they do not need for public use now or in the foreseeable future. Land or existing infrastructure assets (e.g. water and energy infrastructure) can be leased to private sector developers and/or operators at a price. The resulting revenue can be used as initial capital for upfront costs related to public infrastructure investments.

Advantages

- Land leases can encourage private sector participation without compliance with the usual liquidity requirements of the private sector to participate in projects. It is also cheaper than bearing borrowing costs.
- More sustainable revenue source than selling land and assets outright.

Challenges and risks to implementation

- Risk of inefficient or underused infrastructure development that does not meet local needs if land leaseholds are not primarily used to leverage new infrastructure assets tied to a city’s land-use plan.
- Leaseholds are likely to need to be complemented by taxes and charges to pay for maintenance and expansion of infrastructure service provision.

Example in practice: Land leasing for infrastructure development in Ethiopian cities

Challenge

Ethiopian cities, particularly smaller ones, struggled with limited revenue streams to invest in much-needed infrastructure projects. Traditional sources like local taxes offered minimal growth potential.

Solution

The Ethiopian government introduced a land leasing program in urban areas. Municipalities were granted economic rights to income generated from leasing public land. This provided them with a new, significant revenue source.

Outcomes

- Increased infrastructure spending: Land lease revenue became the largest source of income for many municipalities, surpassing traditional revenue streams. This allowed them to invest in essential infrastructure projects like water distribution upgrades and road improvements.
- Entrepreneurial advantages: Cities with proactive leadership, like Mekele, saw even greater revenue growth. They employed strategies like public auctions and identifying undeveloped land for lease, maximizing income generation.

Source: World Bank, Land leasing and land sale an infrastructure financing option

3.2.2 Property taxes

Definition

Property taxation is a revenue-raising instrument that many municipalities could develop as a significant source of finance. Property taxation can be progressive, physically tied to the locality, and relatively easy to collect compared with other forms of taxation. Its successful implementation depends on a few factors:

- Decentralization and municipal own source revenue require clarity of spending responsibilities at the local level and political will at the national level.
- A robust cadastre is important as a basis for identifying property records. Digital solutions are increasingly important in this regard.
- There must be clarity as to sources and uses of funds as well as responsibilities for liabilities.

Advantages:

- Relatively easy to collect compared with other forms of taxation.
- Property tax can provide a reinforcing link with land value capture mechanisms.
- Taxing immobile assets is less likely to exacerbate regional inequalities, e.g. wealthier individuals moving to lower-income tax regions.

Challenges and risks to implementation:

- Property tax collection may be costly to administer.
- It can lead to liquidity problems for homeowners with valuable real estate assets but low incomes.
- Property tax administration requires the revaluation of property regularly.

Example in practice: Improving land and property tax systems

A good tax system applies a low tax rate across a broad tax base. Without a wide range of land/and property to tax, very high tax rates become necessary to yield sufficient revenues, and these revenues are more unstable. In many developing cities, land and property cadasters are seriously incomplete, resulting in a significant loss of municipal revenue from land and property taxes.

This highlights the importance of land and property right registration in implementing land/and property taxes.

A few examples to improve taxation include:

- Better land registration: In Kampala, Uganda, the Kampala Capital City Authority (KCCA) undertook cost effective but critical reforms to improve municipal revenue collection.The KCCA emphasized treating taxpayers as clients by focusing on two points: improvement of communication and convenience for them. They introduced installment payment options and set up a dedicated office for large taxpayers, providing premium services and relationship managers. These efforts, combined with targeted communication campaigns to raise awareness about the importance of tax compliance, significantly increased voluntary compliance and municipal revenue. This policy reflects a strategic approach to tax collection, recognizing that effective revenue generation doesn't always require costly, forceful enforcement methods. Instead, it can leverage simpler, cooperative, and cost-efficient measures to encourage compliance. As a result of this and other similar policies, the KCCA managed to more than double its own-source revenue between 2011 and 2015.

Source:
International Growth Centre (2018), https://www.theigc.org/publications/revenue-administration

- Increasing tax compliance: In Liberia, different types of information notices were sent to property owners in 2017 regarding real estate registration and taxes. While notices that simply communicated the need to pay taxes had limited effect on tax payment, notices that were personalized to address the owner by name, including a photograph of the property (to highlight the potential for detection) and that included details of legal sanctions for noncompliance were far more successful – increasing tax payment from 1% to 5%.

Source: Cities That Work (2018), Land and property taxes for municipal finance

Useful additional resource
The Property Tax Diagnostic Manual is a resource created by the World Bank to guide how to analyze and assess immovable property tax systems, diagnose the strengths and weaknesses of such systems, and develop a property tax intervention strategy where needed. It is especially useful for the implementation of tax systems in low- and middle-income countries, with significant potential for sustainable improvements.

Source: Kelly, Roy; White, Roland; Anand, Aanchal. 2020. Property Tax Diagnostic Manual. Washington, D.C.: World Bank Group. https://hdl.handle.net/10986/34793

3.2.3 Land value capture

Definition

Public regulation, planning, or investment can increase the value of land. Land-value capturing (LVC) allows the public sector to financially capture such a value increase.

Let's take an example, imagine a quiet suburban street suddenly becomes a major thoroughfare because a new highway connects nearby. This increased access makes the land along the street more valuable. Property owners might see their land prices go up due to the improved access and potential for new businesses.

Land value capture (LVC) is a way for cities to capture some of this increased profit generated by the public investment (the highway). It's like a tool to collect a portion of the extra money the land makes because it's now more desirable due to the new road.

Advantages

- **More money for cities:** LVC can provide cities with a steady stream of revenue to invest in things that benefit everyone, like improved public transportation, parks, or even further road maintenance.
- **Fairness:** some argue it's fair because the public investment (the highway) increased the land value, so the public should share some of the gains.
- **Encourages development:** LVC can incentivize developers to build projects that complement the new infrastructure, like mixed-use developments with shops and residences, not just sprawling single-family homes.

Challenges and risks to implementation

- **Complexity:** Designing and implementing LVC schemes can be tricky, requiring careful planning and legal expertise.
- **Opposition:** Landowners might resist having to pay more, and developers might see it as a disincentive to build.
- **Targeting:** It's important to capture the right amount of value increase without discouraging investment or making housing unaffordable.

Example in practice: see Manizales, Colombia example on betterment levies in next section.

3.2.4 Development charges

Definition

There is a wide variety of one-time development charges that can be placed upon private sector companies and individuals who are developing land. One example is tap/ linkage fees (connection fees – also possible as developer exactions), paid by the developer or beneficiary for linking up to an infrastructure network (e.g. electricity line). Another example is impact fees imposed on developers for the negative effects of their development (e.g., noise and air pollution) on the environment, people, or the infrastructure system. In that sense, development charges function to collect fees to pay for related infrastructure or other scale-up or improvement measures.

A well-developed development control system must be in place to apply development charges. This includes a system to guide and enforce land use, assess development proposals, and grant permission or request improvements.

Advantages

- Fair cost sharing: Development charges ensure that the burden of funding new infrastructure needed for growth falls on those who directly benefit from it – the new development projects. Existing residents and businesses wouldn't shoulder the entire cost through property taxes.
- Targeted investment: Development charges can offer an important opportunity to steer urban development towards more environmentally and socially sustainable objectives.
- Reduced reliance on property taxes: By collecting development charges, municipalities can potentially lessen their reliance on property tax increases to fund infrastructure needs. This can help stabilize property tax rates for existing residents.

Challenges and risks to implementation

- Lack of trust and transparency between local governments and developers can be a major obstacle.

Example in practice: Community Infrastructure Levy in the UK

The UK's Community Infrastructure Levy (CIL) helps local governments raise revenues by charging developers a fee based on new developments to fund infrastructure projects. This levy is applied to developments such as housing, retail, and commercial buildings, ensuring that communities benefit from growth through improved infrastructure like schools, parks, and roads.

It is a mechanism for developers to contribute financially towards the additional infrastructure needs created by their projects.

How Does it Work?

- Applicability: The CIL applies to most new building projects that create additional floor space. This can include residential developments, commercial properties, and even extensions to existing buildings.
- Charge Calculation: The levy amount is determined by a pre-defined charging schedule established by the local authority. This schedule typically considers the size and type of development, with larger projects incurring a higher levy.
- Revenue Allocation: Funds collected through the CIL are earmarked for infrastructure projects that directly benefit the local community. These projects can encompass:
- Educational facilities like new schools or nurseries.
- Improved transportation infrastructure such as roads, bridges, or public transport enhancements.
- Public amenities like parks, libraries, or leisure centers.

Source: Planning Advisory Service (2021) - Improving the Governance of Developer Contributions

3.2.5 Charges and levies

Definition

Municipal funding for improved infrastructure can come from user charges that target a range of services provided by the municipality or actions having negative effects such as impacting air quality and traffic congestion. These include congestion charges, road tolls, parking fees, and service fees for water and waste collection. This revenue directly contributes to funding for projects like expanded public transportation, green spaces, and improved waste management systems. It's a win-win: the fees raise money for better infrastructure, and improved infrastructure can incentivize more sustainable choices down the line.

Advantages

- Charging and pricing can create significant behavioral change impacts, reducing the use of private vehicles that cause congestion and greenhouse (GHG) emissions.
- Revenue generation also helps to cover the scheme's costs and can provide additional revenue to invest in climate action.

Challenges and risks to implementation

- Strong municipal governance is needed to plan and implement such pricing and changing mechanisms.
- Opposition from user groups such as frequent drivers or businesses who believe that charging schemes will have a negative impact. However, there is mounting evidence from schemes that road users and businesses have experienced much greater positive than negative impacts following implementation.

Nottingham faced significant traffic congestion and air pollution, which negatively impacted the quality of life for its residents. The city's infrastructure was struggling to cope with the high volume of vehicles, and traditional solutions relying solely on municipal investment were deemed unsustainable. Additionally, there was a need for substantial investment in public transportation to provide viable alternatives to car travel.

Example in practice: Workplace Parking Levy in Nottingham (United Kingdom)

Example in practice: Workplace Parking Levy in Nottingham (United Kingdom)

Solution

In 2012, Nottingham introduced the Workplace Parking Levy (WPL), the first of its kind in the UK. The levy required employers who provided 11 or more parking spaces to pay an annual fee per space. The revenue generated from the WPL was ring-fenced by law to be spent on improving local transport infrastructure. The funds were used to extend the tram network, renovate the main railway station, and introduce a fleet of electric buses, among other projects.

Outcomes

- Increased Revenue for Infrastructure: The WPL generated over £25 million in its first three years, which was reinvested in public transportation and infrastructure improvements.
- Reduced Traffic Congestion: The levy successfully reduced the number of vehicles entering the city center, leading to improved traffic flow and shorter travel times.
- Improved Air Quality: By reducing the number of vehicles, the WPL contributed to lower levels of air pollution in Nottingham.
- Sustainable Funding: The revenue from the WPL provided a sustainable source of funding for ongoing and future infrastructure projects.
- Economic Benefits: The improved transport infrastructure attracted inward investment, resulting in the creation of new jobs and economic growth in the city.

Sources: Center for Cities (2018)
https://www.centreforcities.org/blog/workplace-parking-levy-answer-cities-transport-congestion-problems/

Dale, S., Frost, M., Gooding, J., Ison, S., & Warren, P. (2014). A case study of the introduction of a workplace parking levy in Nottingham. In Transport and sustainability (pp. 335–360). https://doi.org/10.1108/s2044-994120140000005024

Additional instruments such as blended finance, municipal enterprises crowdfunding and case studies can be found in **Module 7: Mobilizing Funding and Resources from the "Foundation for Future Readiness" course**.

You can find more information on available instruments and their feasibility in your context using the financial instruments toolkit developed by the City Climate Finance Leadership.

3.3 Example of municipalities having improved local revenue generation

Colombia

Betterment levies for urban infrastructure financing of Alfonso Lopez Plaza in Manizales, Colombia

The Colombian city of Manizales provides a successful example of using betterment levies to finance urban infrastructure projects. This case study focuses on the renovation of Alfonso Lopez Plaza, a central public space.

CASE STUDY: BETTERMENT LEVIES FOR URBAN INFRASTRUCTURE FINANCING OF ALFONSO LOPEZ PLAZA IN MANIZALES, COLOMBIA

The Colombian city of Manizales provides a successful example of using betterment levies to finance urban infrastructure projects. This case study focuses on the renovation of Alfonso Lopez Plaza, a central public space.

The challenge:

Alfonso Lopez plaza, once a vibrant hub, had deteriorated over time. Manizales lacked the budget to undertake a major renovation.

The solution:

Manizales implemented a betterment levy – a special tax assessed on properties benefiting from the infrastructure improvement. In this case, most properties surrounding the plaza were subject to the levy.

The outcome: the levy successfully financed the renovation of Alfonso Lopez plaza, transforming it into a popular destination again.

Key takeaways:

- Manizales' case demonstrates the potential of betterment levies for funding urban infrastructure improvements, particularly in situations where specific properties directly benefit.
- The predictable revenue stream and high compliance rate (over 85%) highlight the effectiveness of this approach.
- Public engagement and clear communication about the project's benefits are crucial for securing resident support for betterment levies.

Photo credits: Frontera Informativa

Challenge
Alfonso Lopez Plaza, once a vibrant hub, had deteriorated over time. Manizales lacked the budget to undertake a major renovation.

Solution
Manizales implemented a betterment levy – a special tax assessed on properties benefiting from the infrastructure improvement. In this case, most properties surrounding the plaza were subject to the levy.

- Fair cost sharing: property owners who would directly benefit from the plaza's renovation, through increased foot traffic or potential property value appreciation, contributed to the project's cost.
- Predictable revenue stream: the betterment levy ensured a dedicated source of funding for the project, allowing for efficient planning and execution.

Outcome
the levy successfully financed the renovation of Alfonso Lopez Plaza, transforming it into a popular destination again.
- Positive impact: the revitalized plaza boosted the surrounding area's vibrancy, potentially increasing property values and attracting businesses.
- High compliance rate: Manizales residents demonstrated a high level of acceptance for the levy, with over 85% of the assessed amount collected within two years.
- Satisfaction with the levy system: surveys revealed that a significant majority of residents found the betterment levy system to be a fair and effective way to finance public infrastructure projects.

Key takeaways
- Manizales' case demonstrates the potential of betterment levies for funding urban infrastructure improvements, particularly in situations where specific properties directly benefit.
- The predictable revenue stream and high compliance rate highlight the effectiveness of this approach.
- Public engagement and clear communication about the project's benefits are crucial for securing resident support for betterment levies.
- Let’s look at an example of the city of São Paulo that has successfully applied a tool called Certificates of Additional Building Potential.

Sources:
Betterment Levy in Colombia | Lincoln Institute of Land Policy:
https://www.lincolninst.edu/publications/articles/betterment-levy-colombia/

Cities Climate Finance Leadership Alliance - Betterment levies for urban infrastructure financing of Alfonso Lopez Plaza in Manizales, Colombia

Brazil

The city of São Paulo, Brazil, is a case of the successful application of a land value capture tool called Certificates of Additional Building Potential (CEPACs) to finance urban infrastructure and social projects. This case study highlights the redevelopment of the Jardim Edith slum, an area facing severe urban challenges, including housing shortages and poor infrastructure.

Challenge
Jardim Edith, a slum neighborhood in São Paulo, faced significant urban challenges, including inadequate infrastructure, housing shortages, and uncontrolled urban sprawl. The city needed a sustainable solution to finance urban development and improve living conditions without overburdening taxpayers.

Solution
In response, the city resorted to Certificates of Additional Building Potential (CEPACs). CEPACs allow developers to purchase additional building rights for market-driven prices in specific urban areas, known as Urban Operations (UOs), through public electronic auctions regulated by the National Securities and Exchange Commission Comissão de Valores Mobiliários (CVM). Each UO has its own zoning rules, and CEPACs allow developers to exceed the standard building density or land-use limitations. The funds raised from the CEPAC auctions of nearby business districts, namely the Faria Lima district, were reinvested into urban infrastructure and social housing projects within the UO area.

Outcome
The use of CEPACs in São Paulo has been highly successful. The instrument raised over $57 million, which was allocated to redevelop the Jardim Edith slum, making significant improvements for residents. Additionally, CEPAC funds have also served to finance other critical infrastructure projects, including contributing to the construction of new metro lines and bridges, showcasing its potential to balance commercial development with social investment.

Key Takeaways:
- Efficient Market Valuation: CEPACs allow market-driven pricing for additional building rights, addressing the challenge of accurately valuing land price increments.
- Reduced Transaction Costs: By selling CEPACs, the city reduced the negotiation costs between developers and individual property owners, streamlining development.
- Anticipated Funds for Infrastructure: The auction model allows the city to anticipate revenue for necessary infrastructure investments, improving planning and execution.
- Targeted Development: By earmarking funds for specific projects, the city enhances developer confidence and ensures that public improvements benefit from private investments.

Sources:
Land Value Capture in São Paulo, Lincoln Institute of Land Policy:
https://www.lincolninst.edu/publications/articles/2021-01-building-value-in-brazil-land-value-capture-supports-community-needs/

Assessing the monetary relevance of land value capture: the case for charges for additional building rights in São Paulo, Brazil, International Journal of Real Estate & Land Planning:
https://ejournals.lib.auth.gr/reland/article/view/6468/6211

Land-value capture and public transport funding, International Transport Forum:
chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.itf-oecd.org/sites/default/files/repositories/public-transport-land-value-capture.pdf

Useful additional resource
The Global Compendium of Land Value Capture, a collaborative initiative between the OECD and the Lincoln Institute of Land Policy, is an effort aimed at exploring the full spectrum of land value capture (LVC) instruments. The compendium also contains useful fact sheets about the uses of such instruments in many economies worldwide. It can be accessed through:

OECD/Lincoln Institute of Land Policy, PKU-Lincoln Institute Center (2022), Global Compendium of Land Value Capture Policies, OECD Regional Development Studies, OECD Publishing, Paris, https://doi.org/10.1787/4f9559ee-en .

3.4 Test your learning

A municipality is looking to increase its local revenue without raising taxes. Which of the following actions would be the most effective (multiple choice selection):

a) Introducing development charges
b) Charging fees for recreational facilities like parks and swimming pools
c) Leasing municipality-owned land
d) Reducing the frequency of waste collection

Correct answer: a) and c) these two-options leverage private sector participation while ensuring the municipality can target the use of the money raised. b) and d) could increase revenue and reduce costs respectively but would do so at the expense of residents and reduce the amount of public services provided which could severely damage the reputation and attractivity of the municipality.

URBAN LEARNING CENTER

Module 4

4 Spotlight on Successful Delivery of a Project

(Funding Absorption)

Module 4

4 Spotlight on Successful Delivery of a Project (Funding Absorption)

What will this module cover?

This part of the module focuses on a few tools and approaches that can help you successfully achieve project delivery within budget and time.

Learning Objectives

On completion of the module, you will be able to:
- Understand Key Project Management Principles
- Improve skills in planning, procuring, and managing project resources
- Apply Project Management Tools to daily work scenarios

4.1 Challenges with efficiently absorbing funds due to limited project management capability inefficiencies, and unforeseen events

So, you finally received the funding needed for your project and are ready to implement your action. The next stage consists of defining a robust project delivery plan and managing it effectively to achieve all benefits.

Rightly or wrongly, projects are often judged by stakeholders as a success or failure depending on whether they are delivered on time and within expected costs. This will also influence your future ability to raise funds, either by building a strong track record or by losing the confidence of key donors.

Project development teams, including municipalities, can struggle to efficiently use project funds for a few reasons:

- **Lack of planning:** without a clear roadmap for project execution, funds might be misallocated or not spent strategically, leading to delays and cost overruns.
- **Bureaucracy and inefficiencies:** complex procurement processes, and delays in obtaining necessary permits and approvals can slow down the use of funds, hindering project progress.
- **Unforeseen costs:** unexpected issues during construction or project implementation can necessitate additional funding, potentially leading to budget deficits.
- **Poor communication:** insufficient communication between different stakeholders or unclear accounting practices regarding project finances can erode public trust and hinder efficient fund management.

4.2 Foreseen solution: improve procuring and managing delivery skills

Most of the time, your project will be implemented using contractors and external providers. The way you select and work with these providers is central to the delivery of the project.

Procurement is one of the key elements to setting a framework and arrangement for contract delivery and one of the most common reasons for project failure. You need to carefully plan your procurement process to ensure you get the best value for money out of the contracts. Some procurement risks are included in Table 3:

Risks	Causes
Rush to tender	Unreasonable expectations
Lack of responses	Unrealistic timescales
Poor quality bids	Lack of research
Price exceeds estimates	Lack of competence
Poor selections	Inappropriate process
Supplier integrity	Inadequate analysis
Fraud	Poor controls

To overcome these risks, you need to thoughtfully plan the procurement process from design to delivery and contractor selection.

Procurement delivery best-practice

1 **Preparing to Tender**

Requirements in the tender should cover:
- Design Information.
- Works information.
- Commercial information including KPIs.
- Draft Contract.

Instructions for Tenderers must be clear and should include:
- How to tender (documents, online portal, forms, etc.).
- What to submit.
- Access to information.
- Queries and clarifications.
- How bids will be evaluated.

2 Tender Process

Nominate a dedicated manager.

Plan and give briefing to bidders: early engagement with bidders will ensure alignment of their responses and better response rates.

Set bid-time relative to complexity.

Promptly answer queries.

3 Evaluation Process

Test before release of ITT – have an expert (outside of your team) review the ITT

Clear and robust assessment.

- Generally, the most economically advantageous tender (MEAT) - not the lowest cost!
- Components: reflecting technical, cost, sustainability, and social value elements – separate teams.
- Clarifications: be clear about how in-person presentations will be used.

Establish and brief the tender evaluation teams on confidentiality, scoring, impartiality, and moderation.

4 Award

Allow time for governance approvals.

Allow contract formation and signing.

Be ready to give feedback to bidders.

Communicate with stakeholders.

More information on Procuring and Managing the Delivery of projects can be found on the UK Town's Fund resource site:
https://townsfund.org.uk/resources-collection/seminar-5-procuring-suppliers-and-managing-the-delivery-stage

4.3 Project management principles and tools

So, you've got the funding, decided, appointed a contractor, announced it to the world, and agreed on a start date. What next and what could go wrong? And when it does, who will be affected, who is responsible, how and who will fix it?

Project Management is the application of processes, methods, knowledge, skills, and experience to achieve the project's objectives. It is about finding the right balance between:

- **Costs**
- **Scope/Quality**
- **Time**

4.3.1 Managing scope

The scope describes exactly what the project must deliver.

Scope management is the process whereby outputs, outcomes, and benefits are identified, defined, and controlled from a plan.

Having a well-defined scope is crucial for successful planning:

- Documenting what is in and out of scope provides a sound baseline to make sure you deliver what is needed and you can measure progress against.
- The scope is normally documented in requirements document that details what the output of the project must do, how it must perform, what it must interface with what standards it must work with etc.
- Each statement must be a single requirement, and it must be clear when you know this has been achieved.

Additionally, in municipal projects, scope management often requires input from various stakeholders such as government agencies, residents, and contractors to ensure that the project's objectives align with community needs and regulations. For example, if a new public park is being developed, stakeholders may need to define whether the park should include recreational areas, environmental considerations, or specific accessibility standards.

Undefined Scope is one of the most common reasons for project failure. It often leads to scope creep, where a project's scope expands beyond the original plan without proper adjustments to the budget, timeline, or resources. This can occur when stakeholders request changes mid-project, such as adding new features or altering designs. Without proper control, these changes can cause delays and cost overruns. To manage scope creep, it's crucial to set clear boundaries, document changes, and assess their impact on the project's overall goals.

4.3.2 Budget and cost control

Budgeting and cost control comprise estimating costs, setting an agreed-upon budget, and managing actual and forecast costs against that budget.

The major components of a budget are:

- **Estimate** – How much the project will cost. Built up from the bottom up, based on quotes or similar projects
- **Contingency** – an amount in reserve for risks and the unexpected

Cost can have 4 possible attributes:

- **Direct costs -** exclusive to the project they include resources. For example, hiring architects to design a new building is a direct cost specific to that building's project.
- **Indirect Costs -** overheads and other charges that may be shared across multiple activities or departments. For example, the IT infrastructure maintenance that supports several municipal projects is an indirect cost shared across multiple initiatives.
- **Fixed Costs -** remain the same regardless of how much output is achieved, such as the purchase of an item or accommodation charges. For example, the cost of acquiring land for a new public housing development is a fixed cost that doesn't change regardless of how many homes are built.
- **Variable Costs -** fluctuate depending on how much resource is used. For example, the price of materials like asphalt used for road repairs increases with the length of the road to be resurfaced.

4.3.3 Managing time with a Gantt Chart

A Gantt chart is a way to show the duration, start time, and relationship of the activities that make your project. Using the links between activities you can see those tasks that can move without impacting the plan and those that cannot. The shortest route through the plan is known as the critical path - Any delay to this path makes your project late. There are many uses of the Gantt chart, as well as measuring progress. It can be used if there is a delay to assess the impact and perhaps change the plan to mitigate any delay.

Task	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S
Lay foundation																												
Build walls																												
Build Roof																												
Landscape Garden																												
Fit Electrics																												
Fit Water																												
Fit Heating																												
Paint																												
Move in																												

In the example shown above, the critical path includes tasks such as laying the foundation, building the walls, building the roof, fitting the electrics, fitting the water systems, painting, and finally, moving in. If any of these tasks are delayed, such as the roof construction or the electrics fitting, it would push back all subsequent tasks, affecting the final move-in date.

On the other hand, non-critical activities are those that have some flexibility in their scheduling. A delay in these tasks doesn't necessarily delay the entire project, as long as they are completed before the next critical task starts. In this chart, landscaping the garden is an example of a non-critical task. Since it is not immediately followed by another task on the critical path, it has some room for adjustment without affecting the overall project timeline. This distinction between critical and non-critical tasks is key to managing project timelines effectively, as it helps identify where delays can be absorbed and where they will affect the final deadline.

4.3.4 Key tools to improve project management practice

Dependencies
Dependencies are defined as “something on which the successful delivery of the project critically depends”.

Key questions to ask yourselves are:
- What dependencies exist that are significant to the project’s success e.g. land acquisition, planning permission, completion of enabling works?
- Are there other projects, operations, and policies on which the project is dependent?
- Are other projects or operations dependent on the outputs of this project?

Risk management
Allows individual risk events and overall risk to be understood and managed proactively, optimizing success by minimizing threats and maximizing opportunities.

A risk is defined as ‘an uncertain event or set of circumstances that, should it occur, will affect the achievement of one or more objectives.

Don’t forget **opportunities**: An event or a series of events, on occurring would offer benefit to a project in terms of cost, schedule, or performance.

All risks should be recorded in a **risk register**.

The risks register is used to:
- Actively manage the risks and allow a shared understanding for all people in the project team.
- Produce mitigating actions that are clearly defined and allocated to individuals to carry out.
- Review and update regularly to make sure actions are being completed and identify any new risks that may have arisen.
- Allow the team to focus their attention on the high probability, high impact risks.

The register should also contain the opportunities to make sure these are exploited as well.

A good way to see where all your risks are, and which are the most important, is to plot them on a grid of probability and impact. This helps to focus on the most critical risks (shown in red).

		Impact				
		Trivial	Minor	Moderate	Major	Extreme
Probability	Rare	Low	Low	Low	Medium	Medium
	Unlikely	Low	Low	Medium	Medium	Medium
	Moderate	Low	Medium	Medium	Medium	High
	Likely	Medium	Medium	Medium	High	High
	Very likely	Medium	Medium	High	High	High

Nonetheless, risk management involves not only identifying and understanding risks but also proactively planning to minimize their impact. Effective risk mitigation strategies fall into four main categories: avoidance, transference, acceptance, and reduction.

1 Avoidance seeks to eliminate the risk.

2 Transference shifts the risk to a third party, such as through insurance or outsourcing.

3 Acceptance acknowledges the risk but prepares for its consequences.

4 Reduction involves taking steps to lessen either the probability or the impact of the risk.

To implement these strategies effectively, project teams must tailor their approach based on the specific nature of the risk. For instance, if there is a risk of a delay in a key delivery, the team might mitigate it by identifying alternative suppliers or by placing orders in advance (risk reduction). In some cases, risks might be transferred by entering into agreements with third parties that take on the risk, such as suppliers offering delivery guarantees (risk transference).

4.3.5 Project plan

The project management tools set out in section 4.3 can be documented in the Project Management Plan (Table 4) and can be based on your initial project case. The level of detail required within any Project Management Plan will depend on the complexity and risks associated with your project. In other words, you need to ensure that your plan is proportional to the project(s). It is also important that your plan retains some flexibility. Things will likely change throughout the lifecycle of your project, so the ability to innovate and adapt to these changes is important.

The plan should not be something you produce, consider completed, and ignore. It is a living document that you should use on a regular basis as you learn more about your project, or as things change. It should be viewed as a tool that helps others in the team understand how the project is being managed.

Element of the Plan	Description
Overview	What is the project?
Scope	What are you doing, and what you are not doing?
Schedule	Milestone or detailed plan showing what will be done, and when
Requirements	Details of what must be done, i.e. how many, what size, where etc.
Roles and responsibilities	What are each of the people doing and what are they accountable for and to whom?
Assurance	How do you know everything is on track, and compliant?
Governance	Who decides what and when as individuals or groups?
Stakeholders	Who has, or could have an impact on the project (individuals, groups)? Who should you be in contact with?
Commercial	How will this be procured and what form of contract, who from, etc.?
Benefits	What are the benefits? How are they managed and tracked? Details of how to measure them and when they will be delivered.
Key risks	What can go wrong? Include how likely, how impactful the risks could be, and what the mitigation is.
Dependencies	Consider both internal and external dependencies. For example, other projects, etc.

4.4 Test your learning

A municipality is planning to implement a green energy project. The project team identifies a potential risk: a delay in the delivery of solar panels due to possible shipping issues, common in the region due to a series of ongoing strikes. This delay would cause a minor increase in costs, but it's unlikely to significantly affect the overall project schedule.

How would you categorize this risk on the probability and impact grid?

a) High probability, high impact
b) Low probability, high impact
c) High probability, low impact
d) Low probability, low impact
e) Medium probability, medium impact

Correct Answer: c) High probability, low impact

What are the main reasons for the inefficient use of funding allocated to a project (multiple-answer question):

a) Lack of planning
b) Bureaucracy and inefficient processes
c) Unforeseen costs
d) Poor communication
e) All of the above

Answer: e) all the above

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