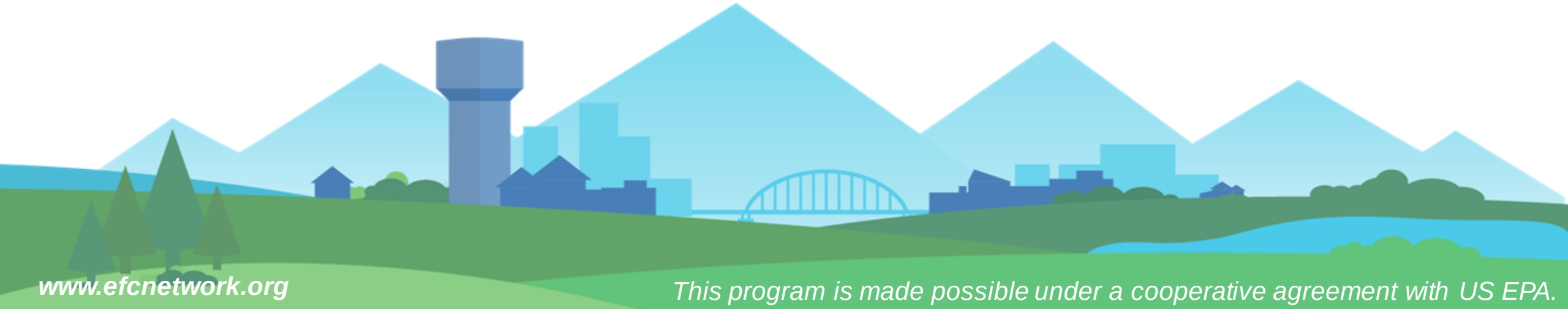
I Got the Money, Now How do I Manage my Projects?

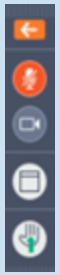
Tuesday, December 19, 2023



This program is made possible under a cooperative agreement with US EPA.

Logistics

Opening the control panel



Show your control panel

All phones/microphones are muted for the duration of the webinar

Toggle between full screen/window screen view

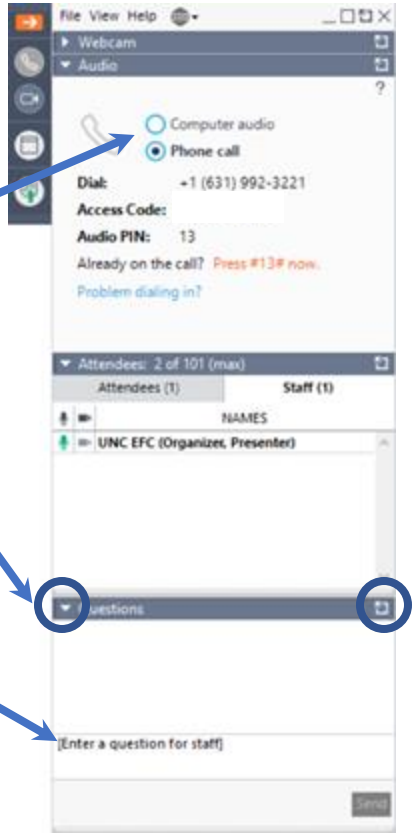
Using the control panel

Audio: please choose between computer audio or phone call

If you do not hear audio right now, please check your speaker volume or enter #[your Audio PIN]# if using phone

Click to open in Control Panel

Submit **questions** in the Questions box at any time, and press [Send]



Click to open in separate box and resize

About Us

The Environmental Finance Center Network (EFCN) is a university- and non-profit-based organization creating innovative solutions to the difficult how-to-pay issues of environmental protection and environmental infrastructure.

The EFCN works collectively and as individual centers to address these issues across the entire U.S, including the 5 territories and the Navajo Nation. The EFCN aims to assist public and private sectors through training, direct professional assistance, production of durable resources, and innovative policy ideas.

The Wastewater Treatment Works Program Team

- Southwest Environmental Finance Center at the University of New Mexico
- Environmental Finance Center at Wichita State University
- Syracuse University Environmental Finance Center
- Environmental Finance Center at The University of North Carolina at Chapel Hill
- Environmental Finance Center at the University of Maryland
- EFC West
- Moonshot Missions
- Mississippi State Water Resources Research Institute

CW SRF Series

- **January 19, 2023** | What is the CWSRF?
- **February 16, 2023** | Changes to the SRF with additional BIL money
- **March 16, 2023** | Economics and affordability of low interest rate loans
- **April 20, 2023** | Why use SRF funds?
- **May 18, 2023** | What types of projects are eligible for CW SRF funding?
- **June 15, 2023** | Assessing Financial Condition to prepare for SRF Application
- **July 20, 2023** | Applying for SRF Funding
- **August 17, 2023** | Documents needed to apply for SRF Funding (PER, EID, etc.)
- **September 21, 2023** | What happens after the application is submitted?
- **October 19, 2023** | Analyzing and Adjusting Rates to Manage SRF Debt Service
- **November 16, 2023** | Navigating Federal Regulations
- ***Tuesday*, December 19, 2023** | How do I manage my grant after award?

A Disclaimer…

Since every state or federal funding source is a bit different, we can't discuss specific paperwork or activities you will have to complete. We are going to talk about activities that are common to most infrastructure projects.

To obtain comprehensive details, we recommend checking your state's website and reaching out to your state contact. Check out EFCN's Funding Tables resource for a compiled list of your state/territory's funding sources and contacts.

Today's Agenda

Planning

Working with Professionals

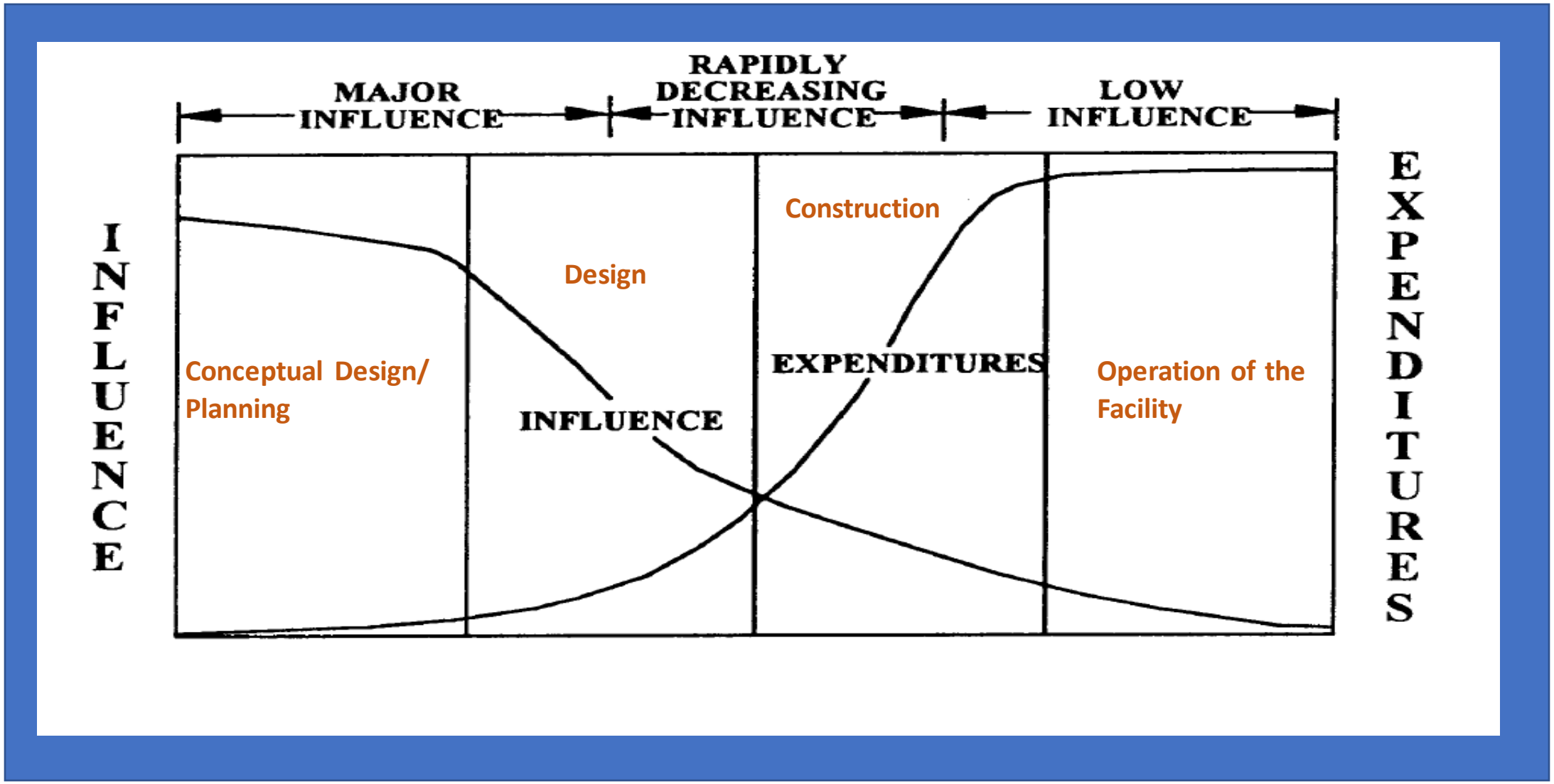
Milestones

Finances

Project Planning

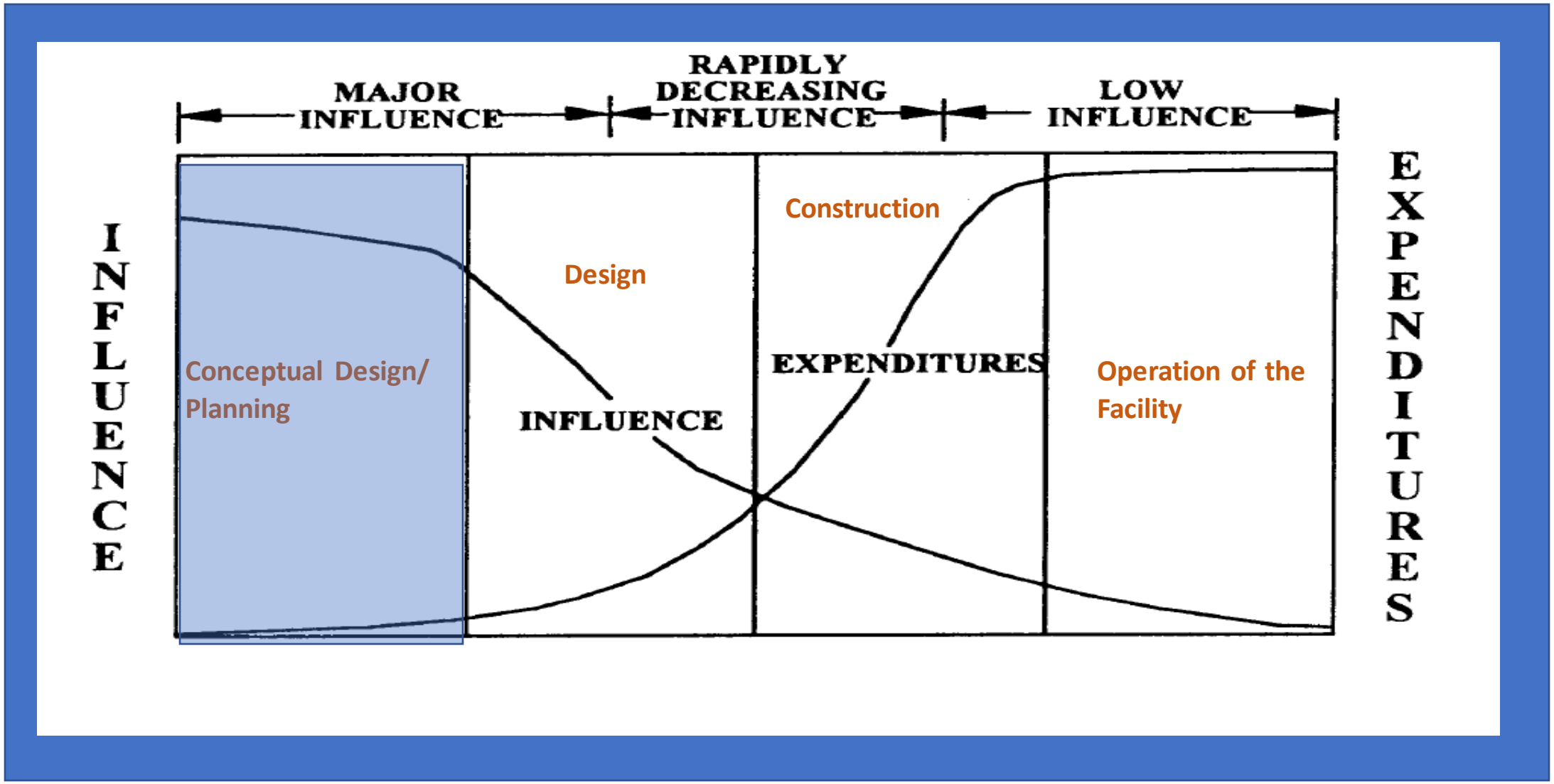
Why planning is so important to the success of your project

Why Does Planning Matter so Much?



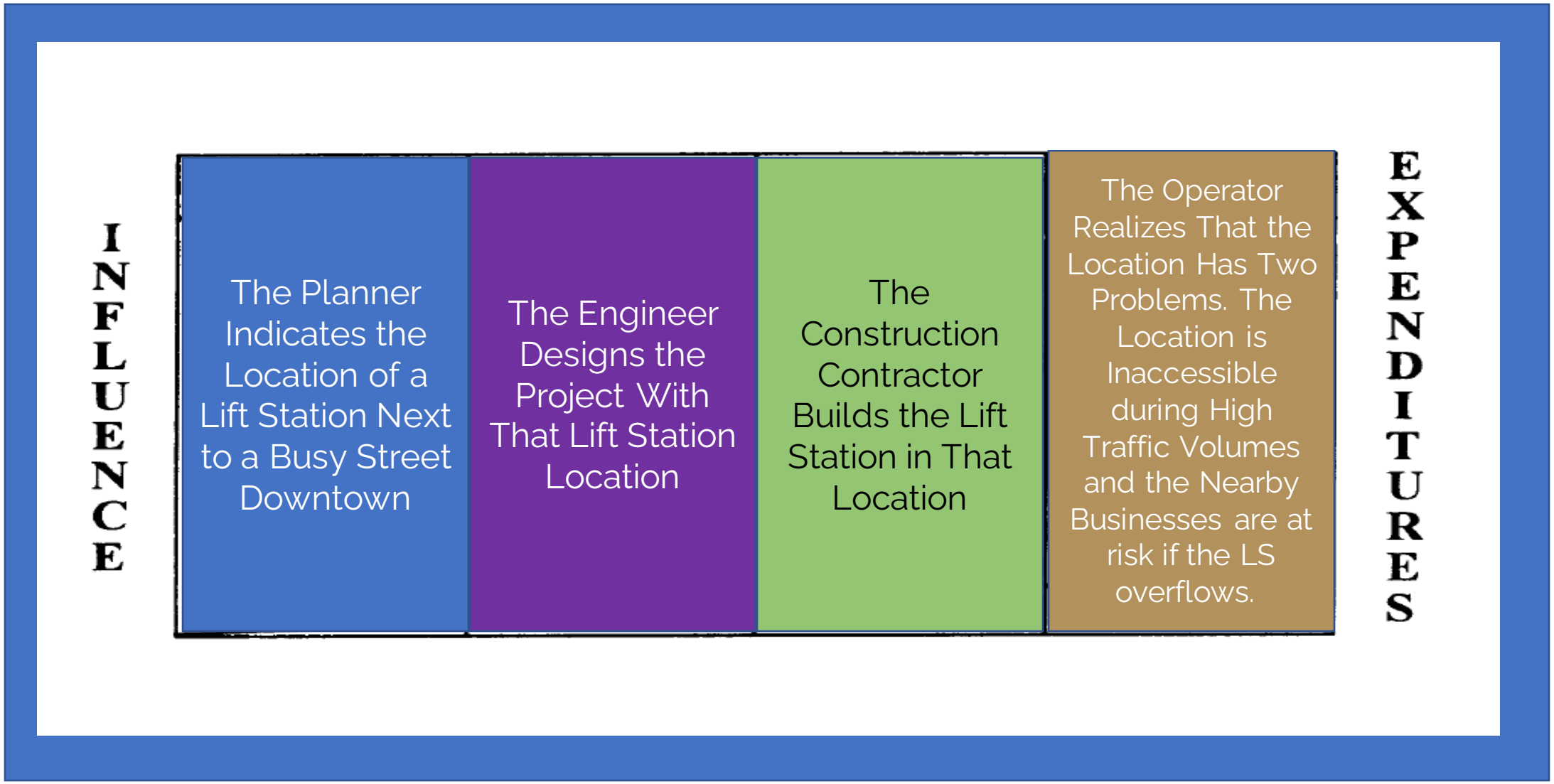
Source: Gibson and Hamilton (1994) Analysis of pre-project planning effort and success variables for capital facility projects. Construction Industry Institute Source Document 105.

Planning Phase: Most Influence, Least Cost



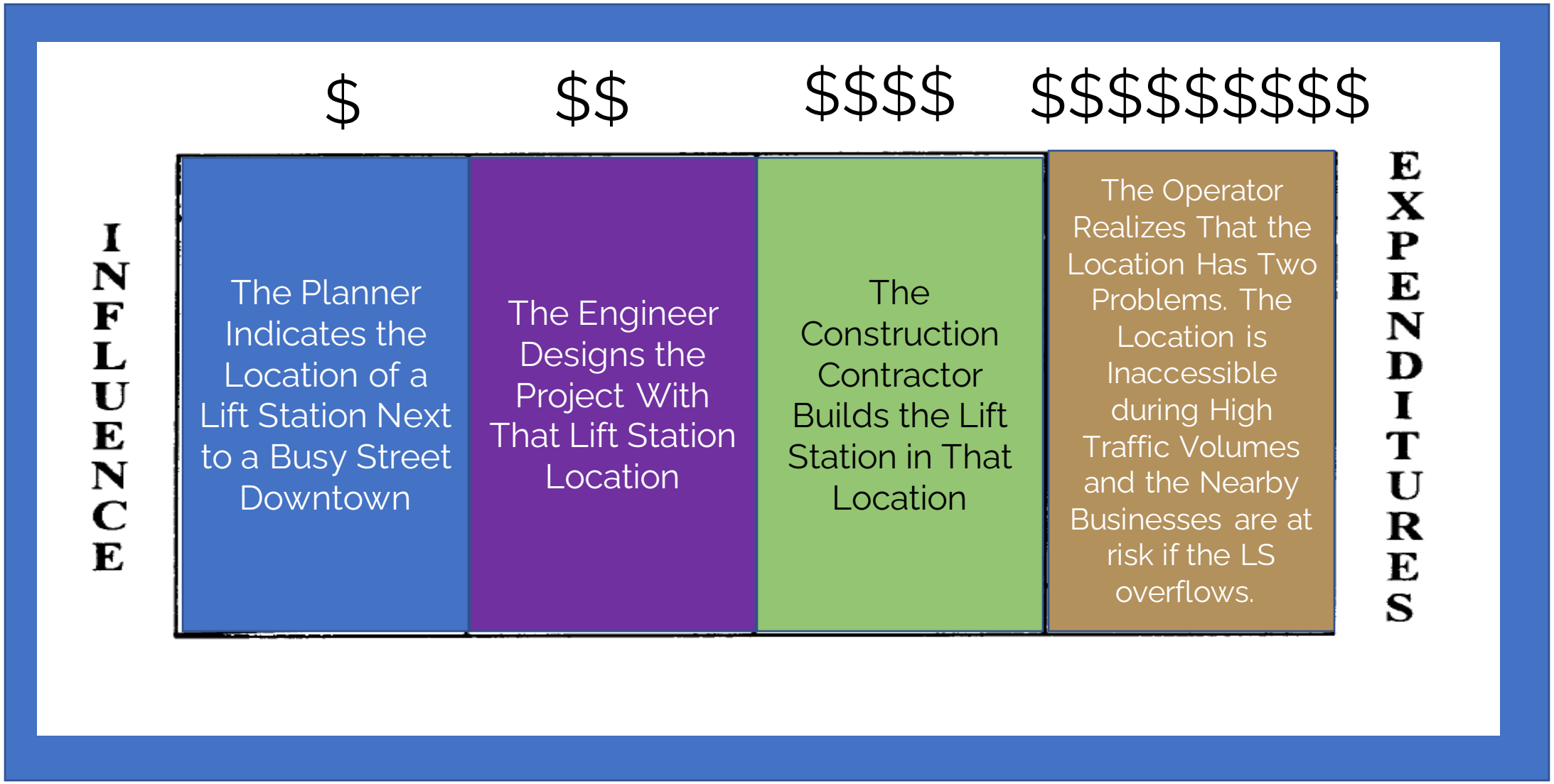
Source: Gibson and Hamilton (1994) Analysis of pre-project planning effort and success variables for capital facility projects. Construction Industry Institute Source Document 105.

Planning Phase: An Example



Source: Gibson and Hamilton (1994) Analysis of pre-project planning effort and success variables for capital facility projects. Construction Industry Institute Source Document 105.

Cost of changing the location at each phase



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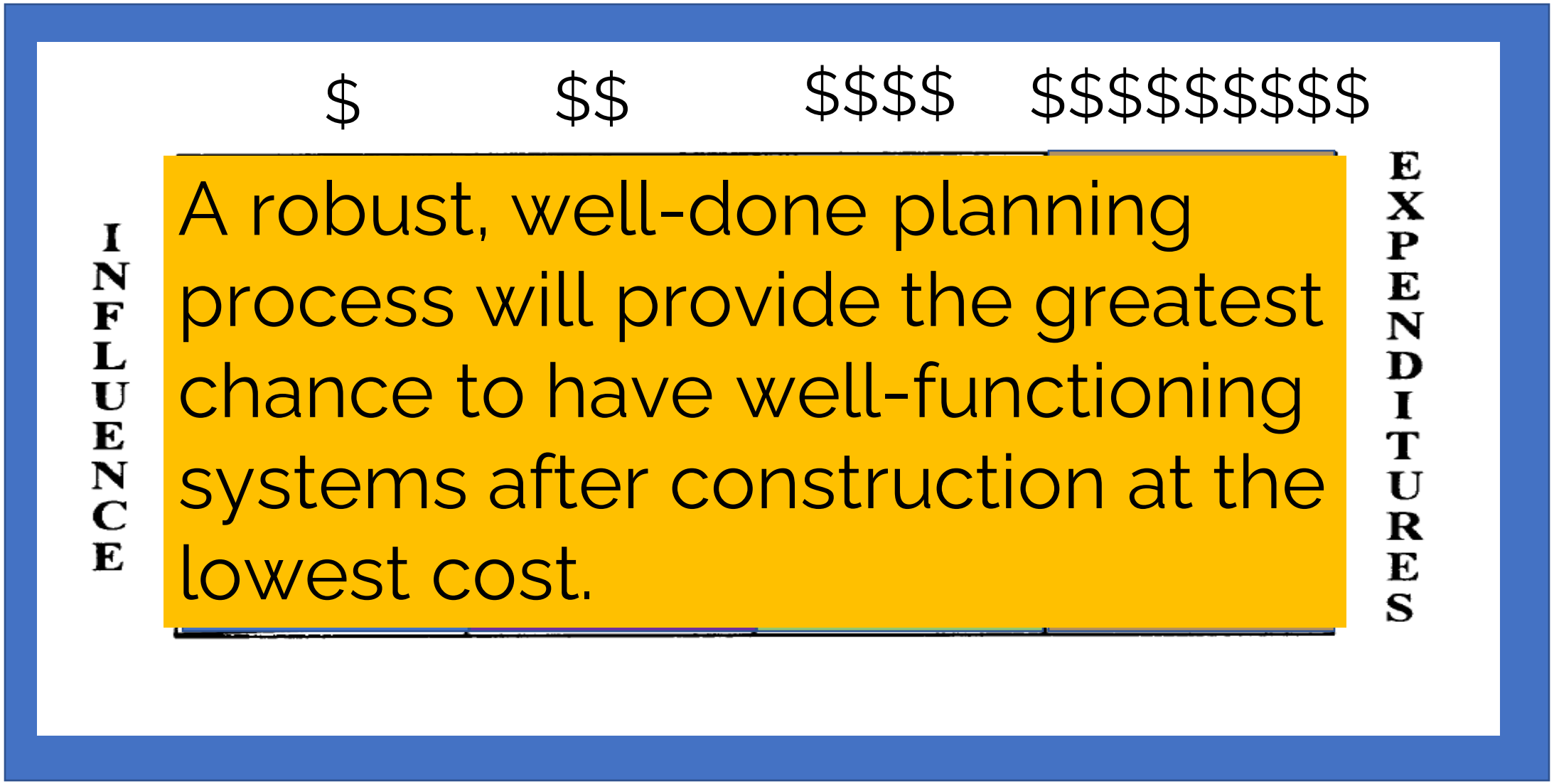


Source: Gibson and Hamilton (1994) Analysis of pre-project planning effort and success variables for capital facility projects. Construction Industry Institute Source Document 105.

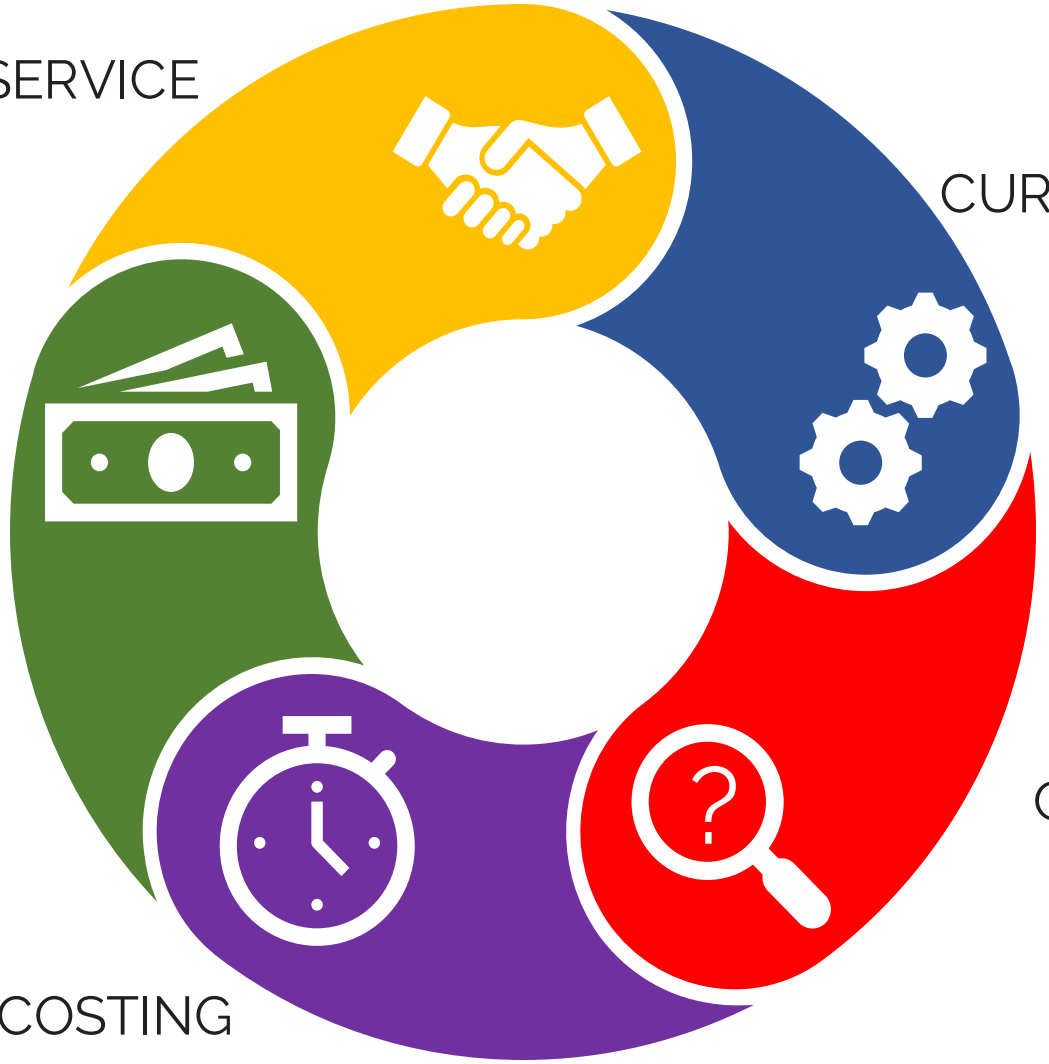
Part of Planning is Understanding Your Initial Starting Place and Your Overall Needs

It Builds Into a Consideration of How These Assets Will Need to be Managed Into the Future (O&M, Repair, Replacement)

Asset Management is One Type of Planning That Can be Very Helpful

Asset Management Involves…

5 Core Components of Asset Management



LEVEL OF SERVICE

CURRENT STATE OF THE ASSETS

LONG-TERM FUNDING

CRITICALITY

LIFE CYCLE COSTING

Another Part of Planning is Asking Questions

What is the overall need for this project?

Is This the Right Project?

Is This the Right Time to Do the Project?

What are the Risks if I Don't Take This Project On Right Now?

What are the Benefits if I Do the Project?

Is This Project Being Timed to Correspond to Another Activity (e.g., Road Paving, Expansion)

Are there any non-construction solutions, i.e. operational changes?

Information you may need:

Historical information – what has worked well in the past and what has not

The environment in which the new assets will reside

The Level of Service the new assets must provide

Any benefits the assets provide, including a thorough consideration of co-benefits

An informed projection of the funding required to bring the asset on board

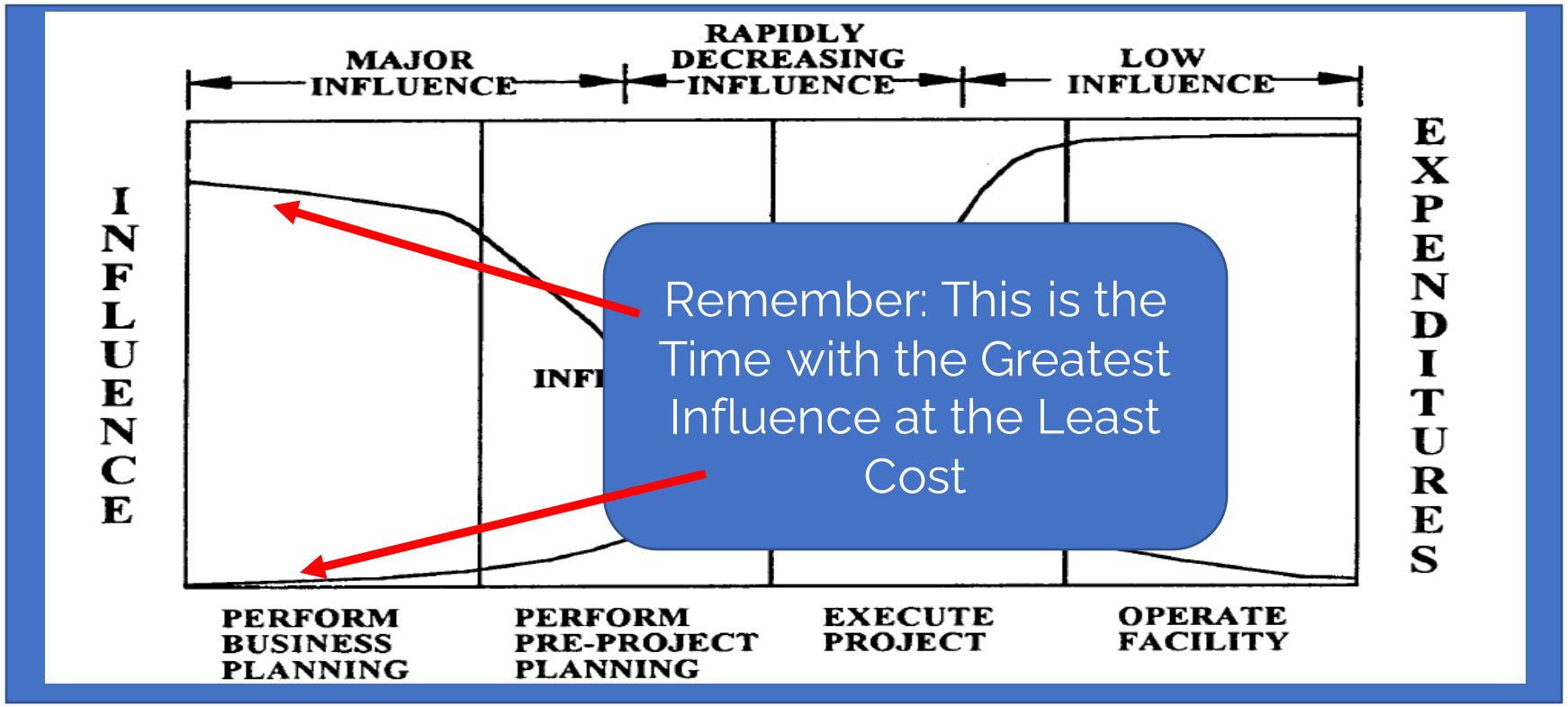
How much it might cost to operate and maintain the asset throughout its life cycle

Any specialized training that might be required to operate and maintain the asset, including higher level operator certification

How the asset can be abandoned in place, recycled, or disposed at the end of life

How the asset will impact the Triple Bottom Line (financial, social, and environmental) of the system

If the Answer is: Not the Right Project or Not the Right Time For the Project, Stop Here & Re-Evaluate



If the Answer is: The Right Project At The Right Time, Move To Design

Working with Professionals

Why interacting with your engineer can save time and money in the long run

During Design You Need to Consider Two Main Factors

Alternatives Evaluation


Operations

Alternatives Evaluation

Alternatives Evaluation

Questions to Ask:

Are All Viable Alternatives Considered?

Are They All Given Equal Consideration or is the Alternative Pre-Ordained?

Are Water System Personnel Able to Suggest Alternatives?

- If so, are All These Options Given Consideration by the Design Engineer?

Alternatives Evaluation

Questions to Ask:

Are the Long-Term Costs of the Alternatives Taken into Consideration or Just the Initial Costs? (What about O&M costs?)

Is Energy Efficiency/Energy Use Considered in the Alternatives Process?

Alternatives Evaluation

Questions to Ask:

Are New Technologies Considered or Just Standard Technologies?

If New Technologies are Considered, are You Given Examples of Utilities Using the Technology? Are You Given a Chance to Speak to These Utilities About Their Experiences?

Alternatives Evaluation

Questions to Ask:

What Does the Write Up of the Alternatives Look Like? Are They Written Up as if All Were Considered Equally?

What Does the Costing Portion Look Like? Were All Alternatives Given the Same Level of Costing?

Alternatives Evaluation

A Few Examples:

A Wastewater System's New Plant Required a Level 4 Operator but the Operator was a Level 2

A System Whose Alternative Evaluation Process Ignored Cheaper, Better Alternatives; Had to be Rejected By the SRF Agency During Review

Recall That Intervening During the Design Phase Still Allows You to Exert a Lot of Influence at a Relatively Low Cost. The More Involved You are the Better Chance to Have a Long-Term Impact

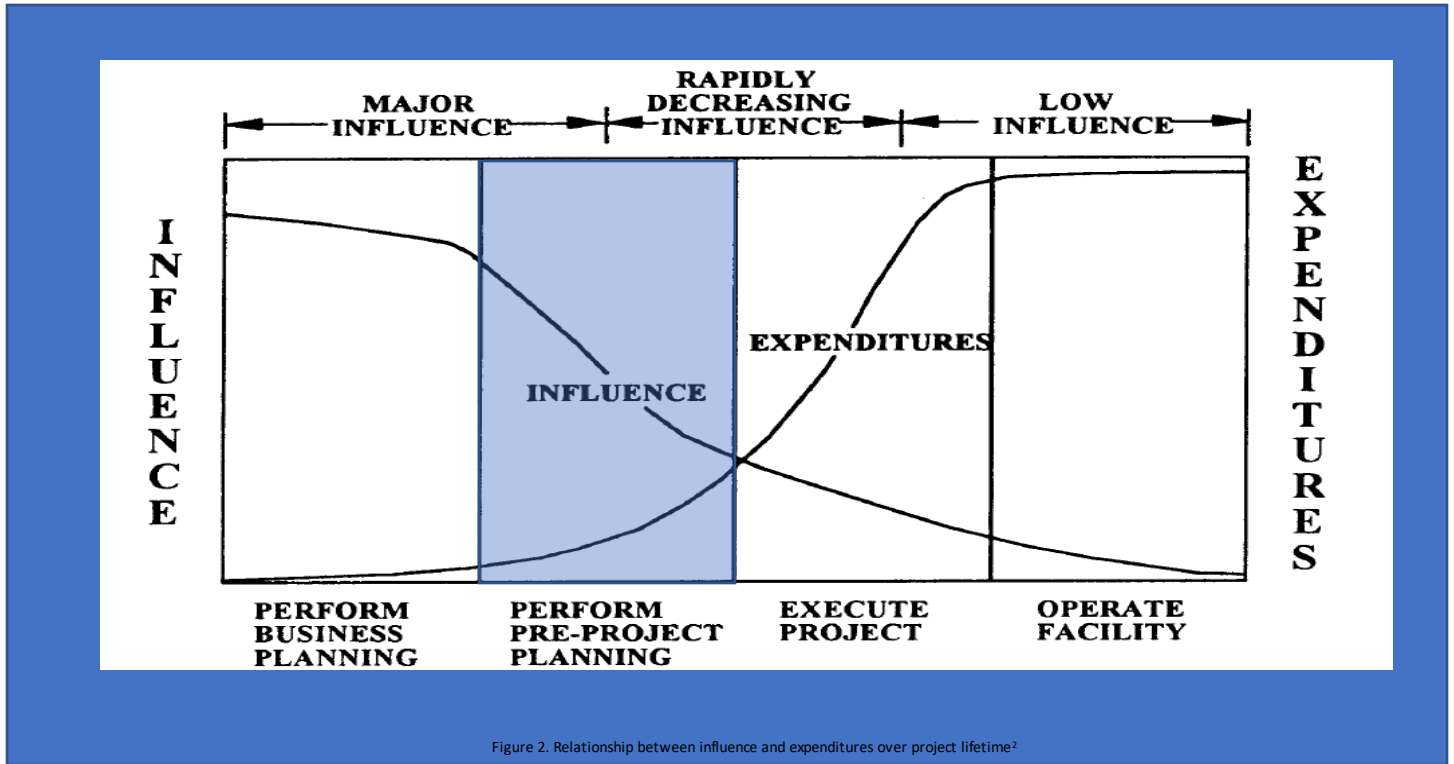
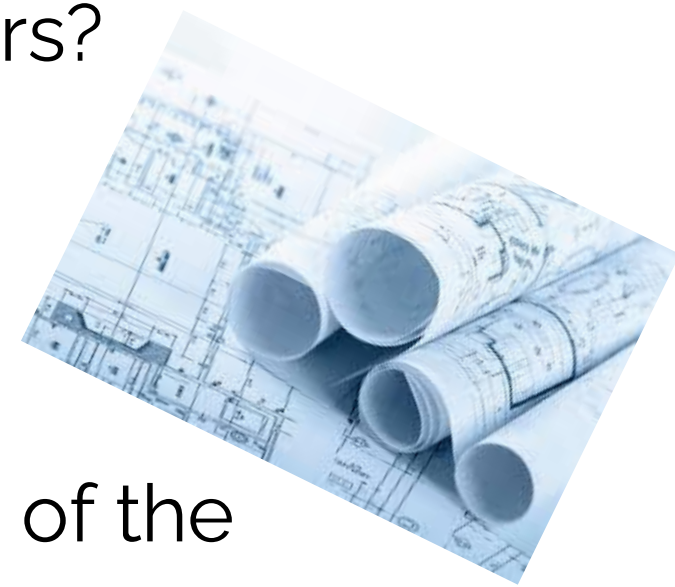


Figure 2. Relationship between influence and expenditures over project lifetime[2]

Beyond the Alternatives Evaluation Process, Having Operations Personnel Work Collaboratively With the Design Engineers Can Help Avoid Future Problems

How Do You Typically Interact With Your Design Engineers?



Who is Involved in the Discussions?
What is the Primary Focus of the Discussions?

At What Point in the Process Do They Occur?

Do Your Engineers Usually Listen to You?

Do the Engineers Speak in a Manner You Can Understand?

If Not, Do You Ask for Them to Explain it in Other Terms?

Remember That You Know How Your Specific System Operates Better Than the Engineer Does

The Engineer Knows What Goes into the Design of the System Better Than You, but Design Engineers May Not be Well Versed in the Operations Part

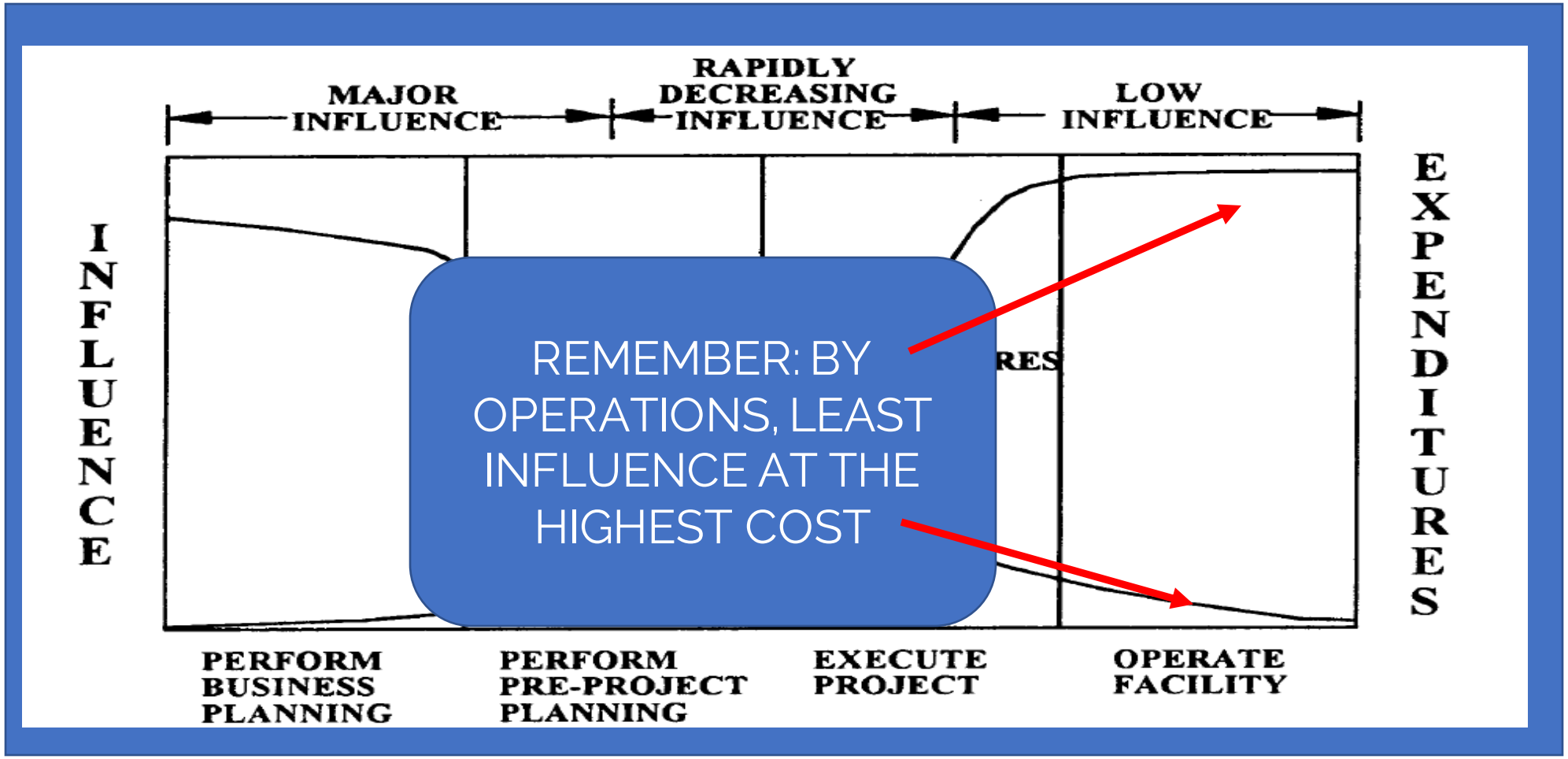
Design and operations are inextricably intertwined.

The best design won't achieve its intended purpose without good operations.

Likewise, the best operations will not fix a poor design.

It is extremely important to think of operations as an integral part of design.

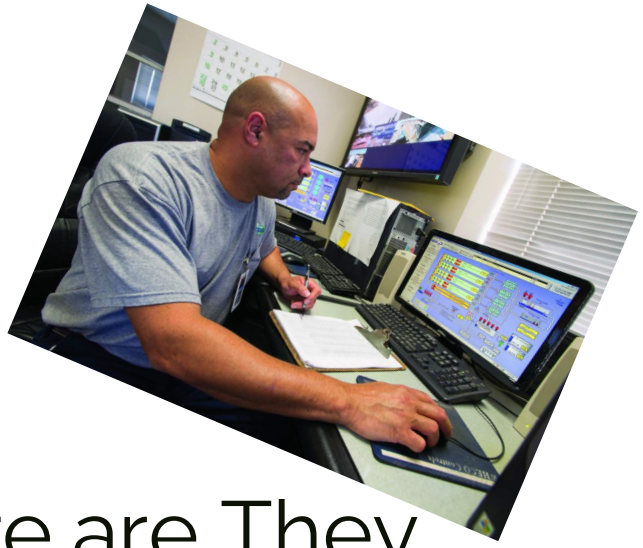
It is Extremely Important to Think Through Operations as an Integral Part of Design



Considerations of Operations in Design

What are the Major Activities Required in Routine Operation of Each Asset Included in the Design? What Maintenance is Required?

Considerations of Operations in Design



What Spare Parts are Required? Where are They Purchased? What is the Cost of the Parts?
What Level of Certification Will Be Required to Operate the New Facility? Is This Different Than the Prior Facility?

Considerations of Operations in Design

What Number of Operators Will Be Required to Operate the New Facility? Is That Different Than the Existing Facility?

What Level of Specialized Training is Required, if Any?

Other things to consider

- Who from your team needs to be involved in each stage of the construction inspection?
- Will any equipment need to be tested before you take ownership?
- Who will be responsible for As-Built and map review? What format would you like them in?
- What other documentation do you need (O&M manuals, SOPs, Warranties, etc.)?
- Will operators need any specialized training for new equipment?
- Who do we contact for post construction questions and for supplies?

At your utility, are operators given a chance to input into the planning and design of new facilities?

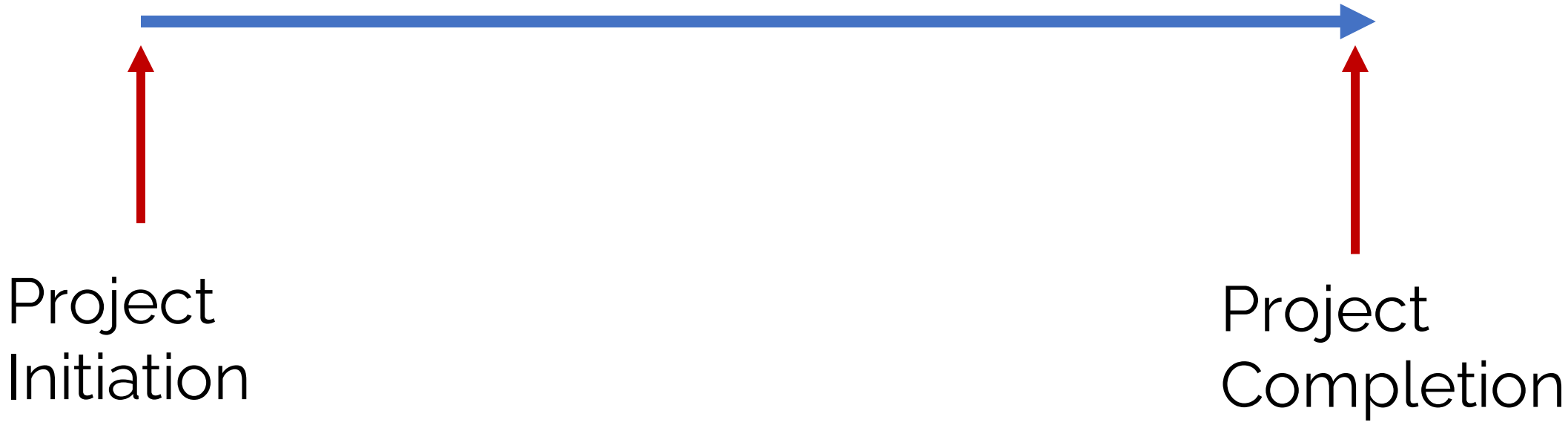
Setting Project Milestones

How to set and track project milestones and budgets

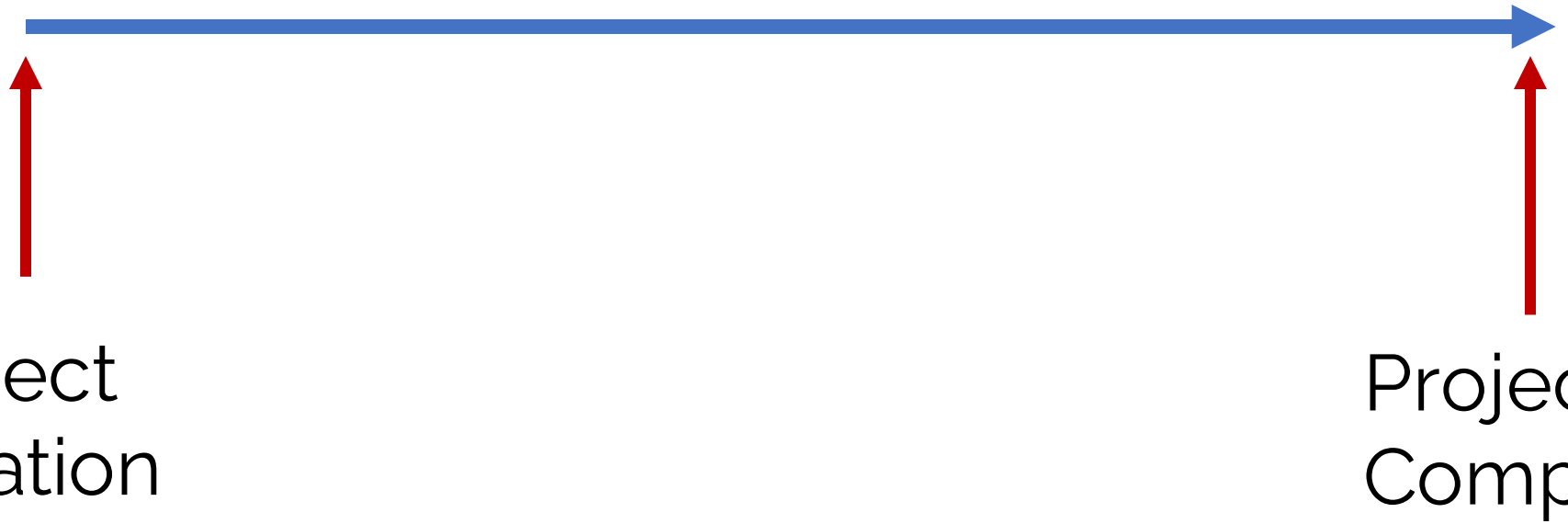
Once You Are Ready to Do A Project it is A Good Idea to Set Project Milestones

Milestones are Major and Minor Tasks Along the Way to Completing the Project

First Milestones: The Major Boundaries



What are the Activities, Outputs, and Outcomes Associated with the Boundary Conditions



VS

What Is Created

The Numeric Results

Does Not Involve A Consideration of Quality; Considers Quantity

Examples:
The Number of People Served By A Wastewater System

The Number of Gallons of Water Treated

The Number of Miles of Pipe Put in the Ground

The Level of Performance, Achievement, or Quality that Occurred Because of the Activity

An Assessment of the Success of the Process

Examples:
The Increase in the % of People Served By The Wastewater System

Improvement Of Water Quality, Such As Through Reduction of a Particular Contaminant in the Discharged Wastewater

Both Are Needed to Assess the Effectiveness of the Project

Outputs Are Usually Easier to Measure and Faster to Achieve; Outcomes Take Longer to See But May Better Define Success

Building Projects to Achieve Outcomes:

1. Describe the Outcomes You Are Trying to Achieve with the Project (Why Are You Doing the Project At All?)
2. Turn the Outcomes You Want to Achieve (Item 1) into Something That Can Be Measured (e.g., % Increase in Customers Served or % Decrease in Number of Sewer Backups)

Building Projects to Achieve Outcomes:

3. Confirm That the Outcomes Are Linked to the Outputs and Activities (Can You Expect to Achieve the Outcomes Based on What You Are Doing?)
4. Implement the Measurement of Outcomes and Track Achievement Over Time
5. Demonstrate Your Success to Regulatory Agencies, Elected Leaders and Customers Based on Your Data

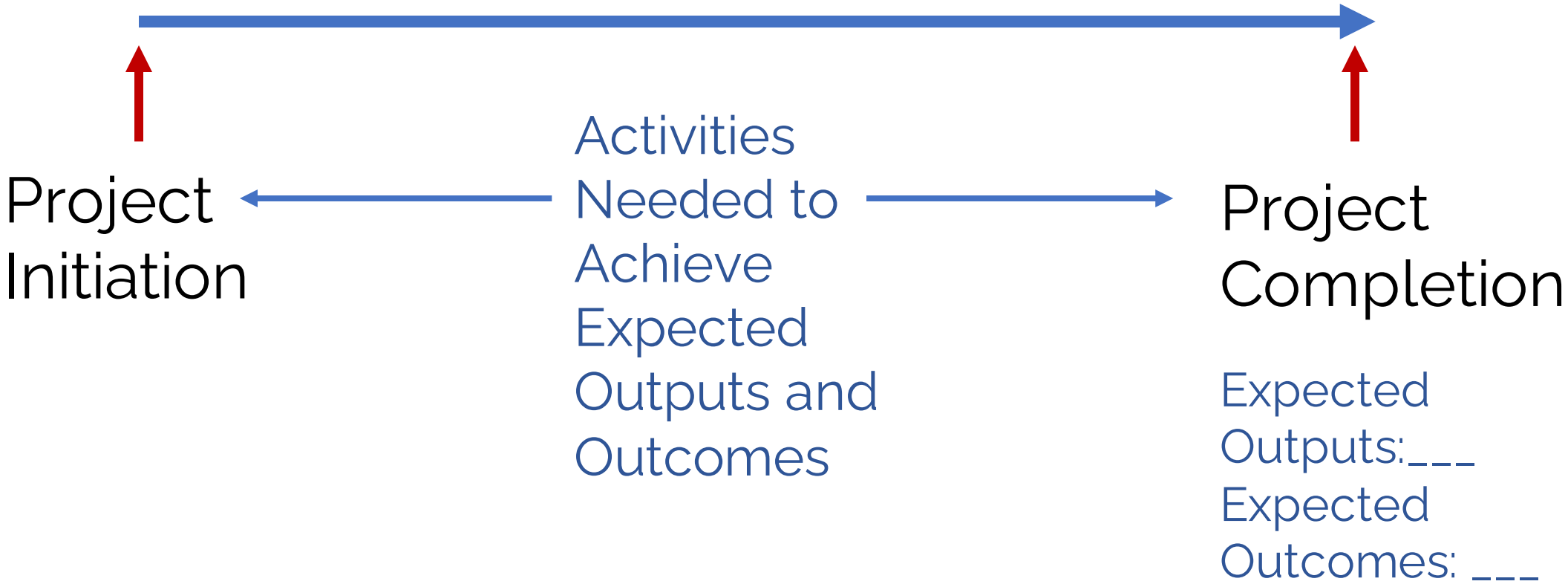
What are the Activities, Outputs, and Outcomes Associated with the Boundary Conditions

Project Initiation

Project Completion

Expected Outputs:___
Expected Outcomes: ___

What are the Activities, Outputs, and Outcomes Associated with the Boundary Conditions



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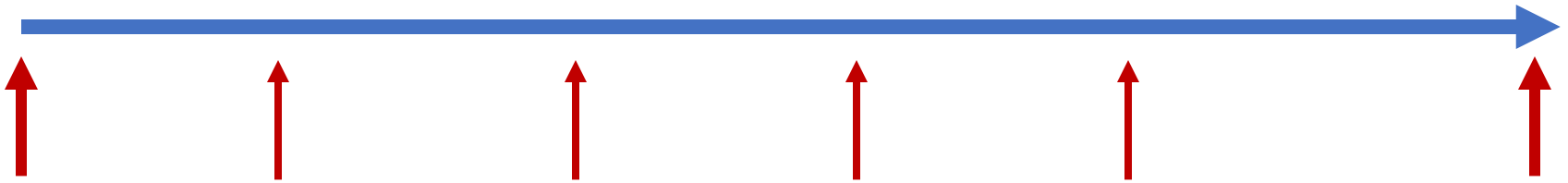


Project Initiation

Major Activity 1

Major Activity 2

Major Activity 3

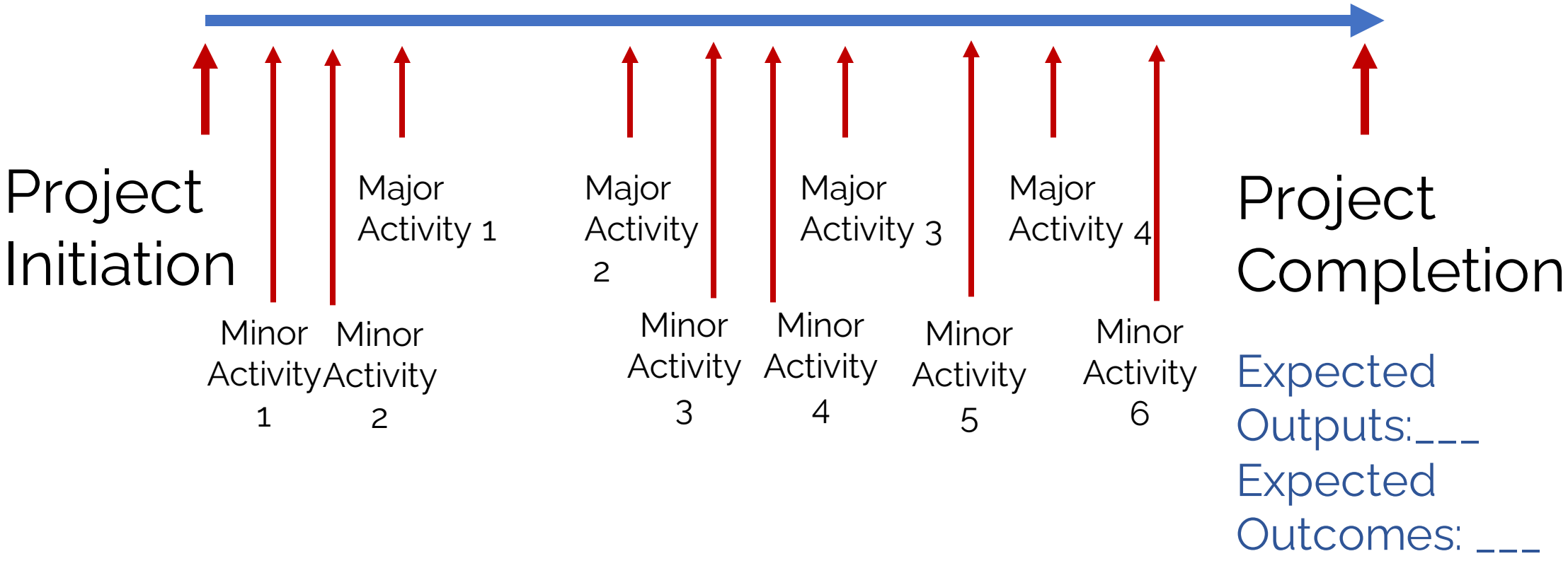
Major Activity 4

Project Completion

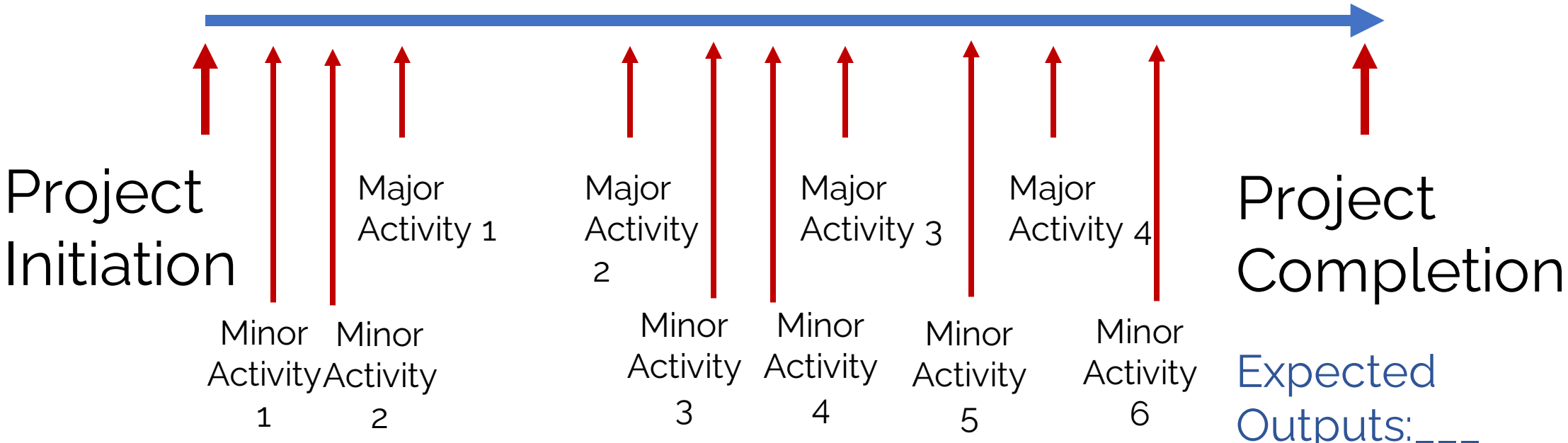
Expected Outputs:___

Expected Outcomes: ___

What are the Activities, Outputs, and Outcomes Associated with the Boundary Conditions



Once All the Major and Minor Activities Necessary Are Included on the Graph, Add Schedule



Expected Outputs:___

Expected Outcomes: ___

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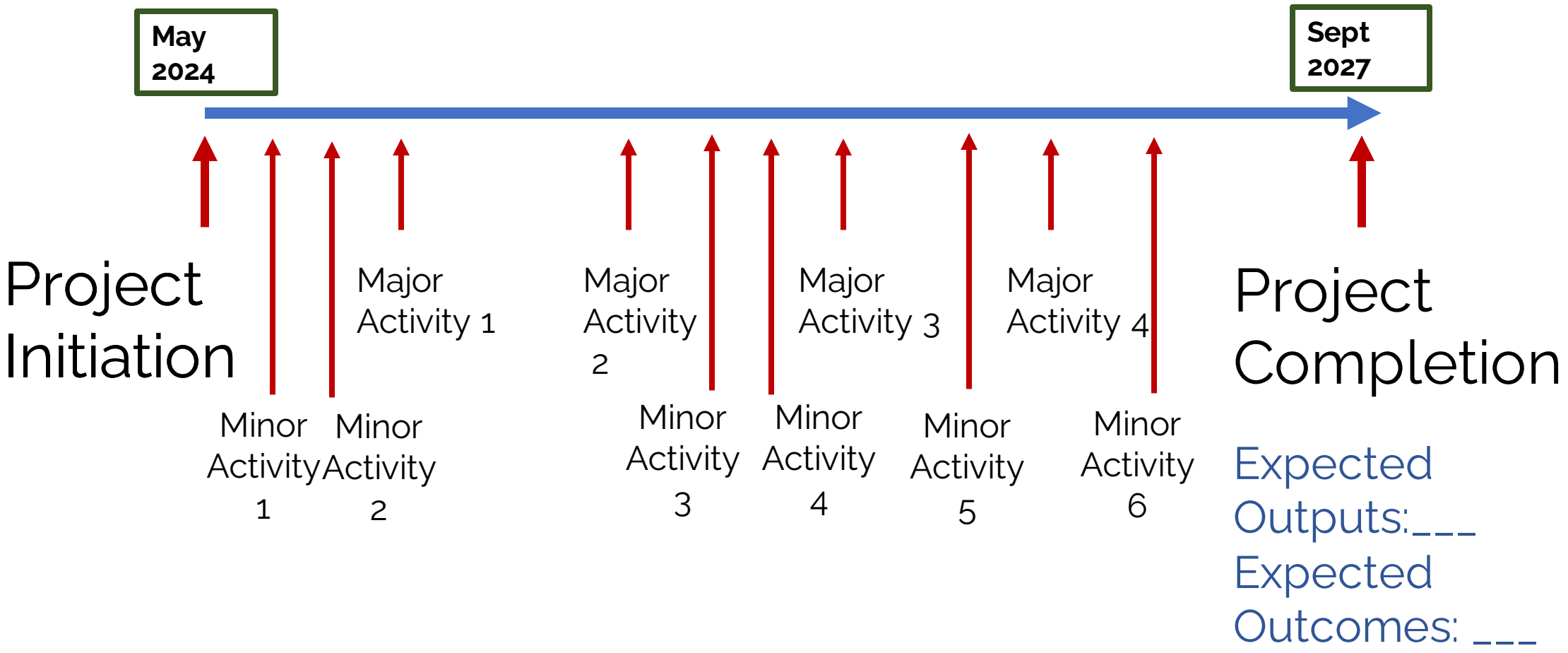
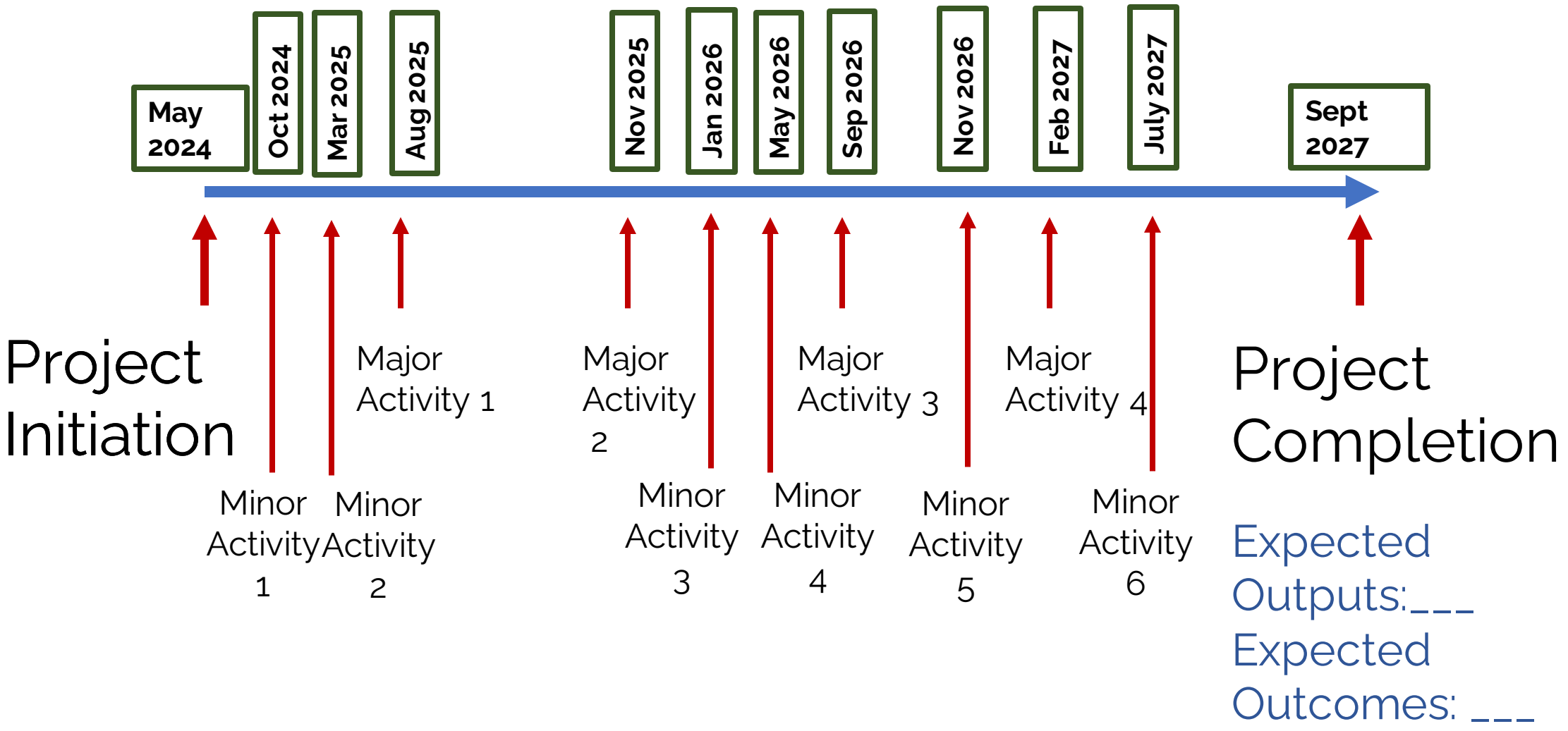
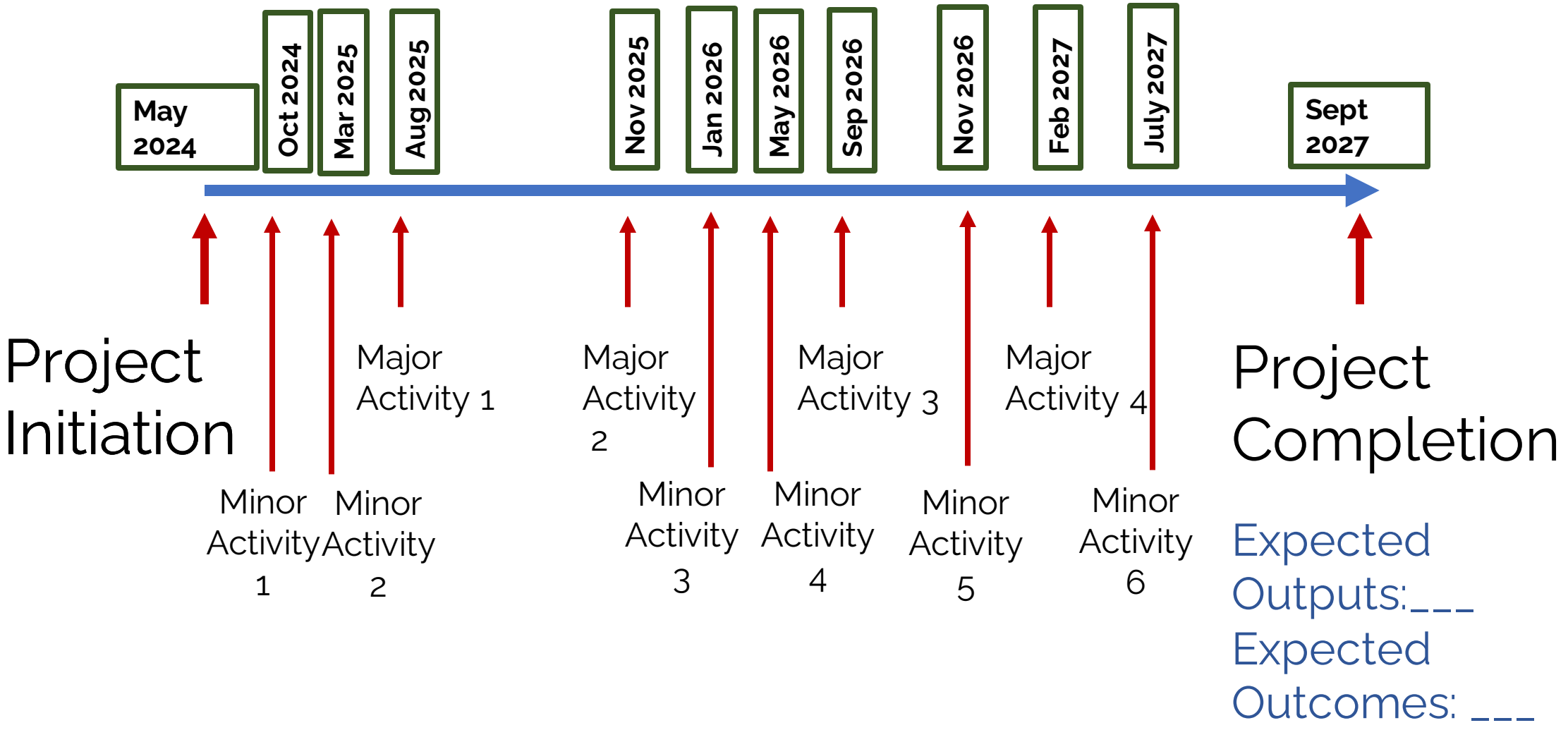


Work with Engineer & Funder(s) to Fill in the Remaining Dates



Work with Engineer & Funder(s) to Fill in the Total Cost



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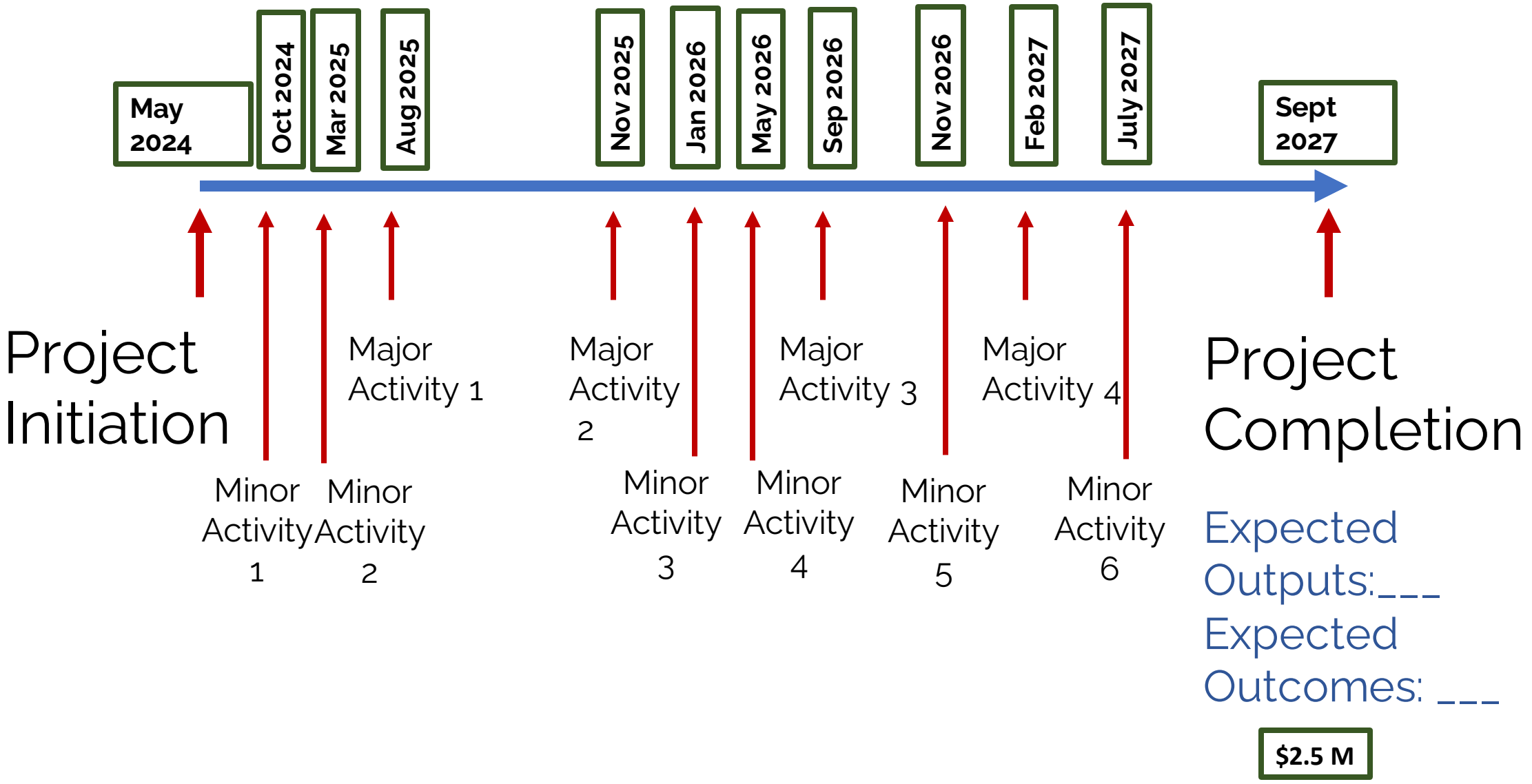
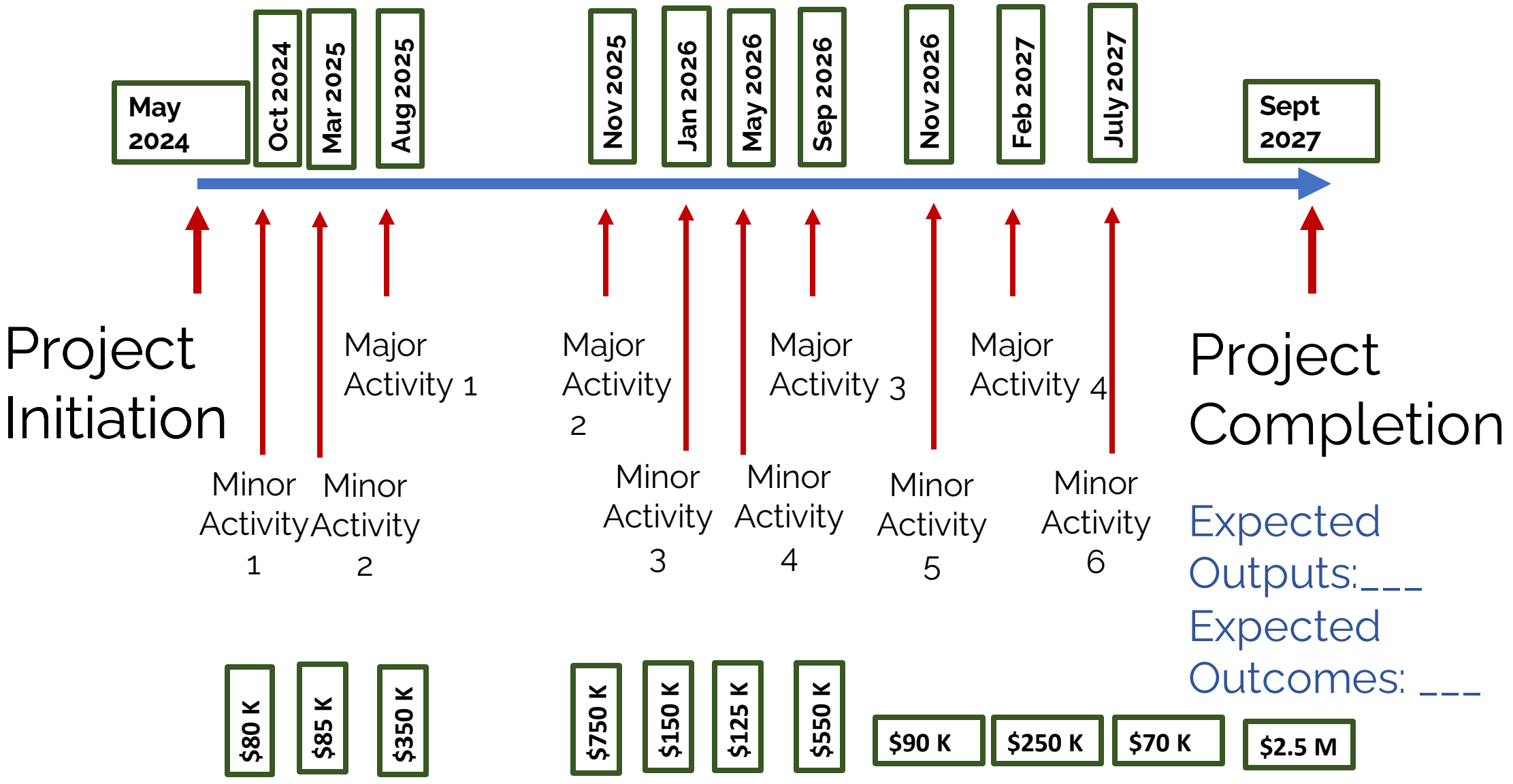


Work w/Engineer & Funder(s) to Fill in the Rest of the Costs



Create a Table with Major and Minor Activities (Tasks), including Completion Date and Costs

Task	Expected Completion Date	Anticipated Costs	Anticipated Cumulative Costs
Project Initiation	May 2024		
Minor Activity 1	Oct 2024	$80,000	$80,000
Minor Activity 2	Mar 2025	$85,000	$165,000
Major Activity 1	Aug 2025	$350,000	$515,000
Major Activity 2	Nov 2025	$750,000	$1,265,000
Minor Activity 3	Jan 2026	$150,000	$1,415,000
Minor Activity 4	May 2026	$125,000	$1,540,000
Major Activity 3	Sep 2026	$550,000	$2,090,000
Minor Activity 5	Nov 2026	$90,000	$2,180,000
Major Activity 4	Feb 2027	$250,000	$2,430,000
Minor Activity 6	July 2027	$70,000	$2,500,000
Project Completion	**Sept 2027**	**$2,500,000**	**$2,500,000**

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Project Completion	**Sept 2027**	**$2,500,000**	**$2,500,000**

Look At Expenditures – How Do Costs Spread Out Over Time? Are There Long Periods With No Expenditures? Are Costs Higher Up Front, or in the Middle, or at the End?

Create a Table with Major and Minor Activities (Tasks), including Completion Date and Costs

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Minor Activity 6	July 2027	$70,000	$2,500,000
Project Completion	**Sept 2027**	**$2,500,000**	**$2,500,000**

Generally, Costs Should Ramp Up At the Beginning to a Higher Level in the Middle and Then Ramp Down to a Lower Level At the End As the Project Slows Down.

Create a Table with Major and Minor Activities (Tasks), including Completion Date and Costs

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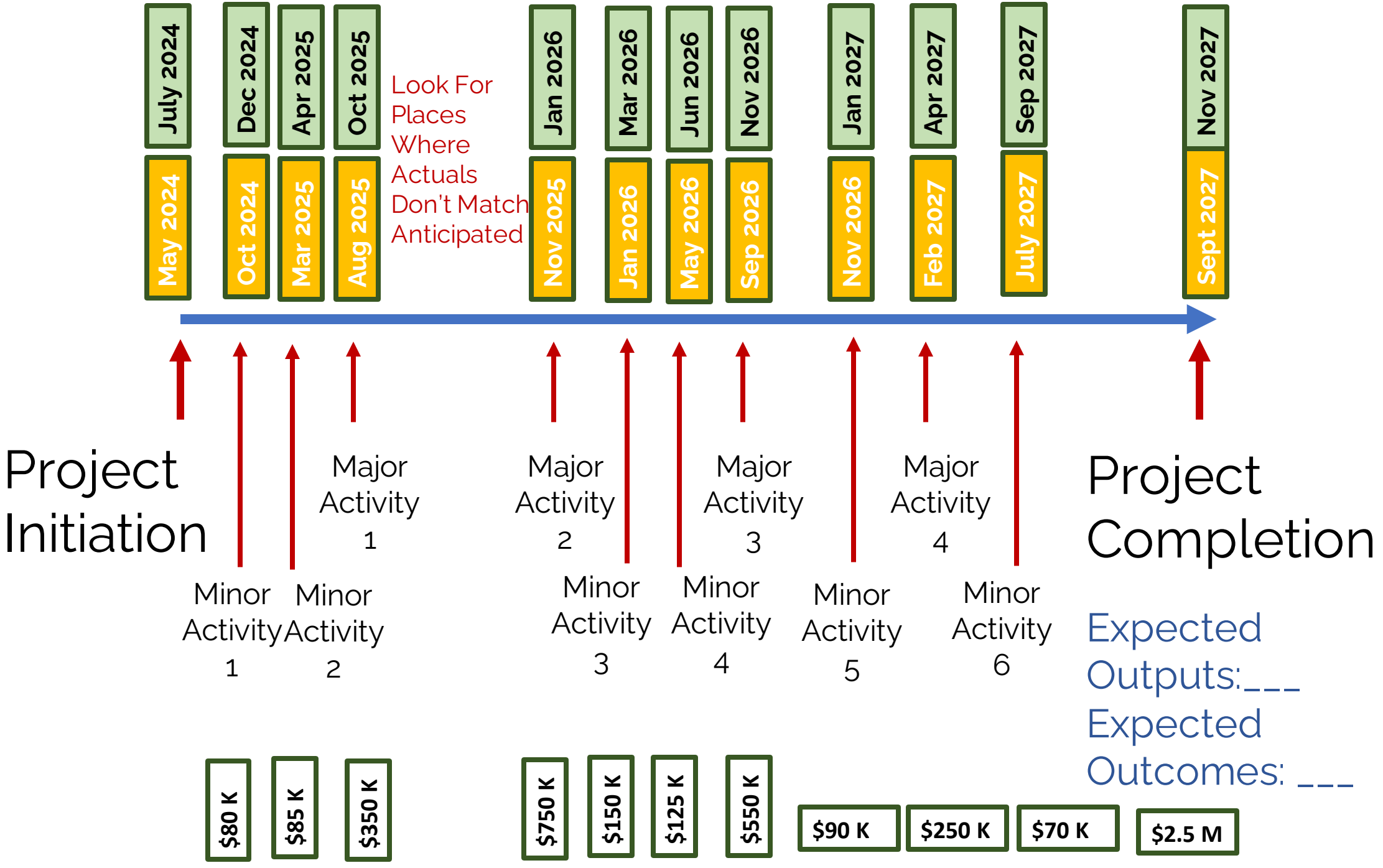
Project Completion	**Sept 2027**	**$2,500,000**	**$2,500,000**

If There Are Long Periods With No Expenditures Anticipated, Consider Adding Minor Tasks To Spread Out Expenditures

During the Project, Check Actual Activities, Schedules, and Expenditures Against the Planned Ones


July 2024
Dec 2024
Apr 2025
Oct 2025
Look For Places Where Actuals Don't Match Anticipated
Jan 2026
Mar 2026
Jun 2026
Nov 2026
Jan 2027
Apr 2027
Sep 2027
Nov 2027
May 2024
Oct 2024
Mar 2025
Aug 2025
Nov 2025
Jan 2026
May 2026
Sep 2026
Nov 2026
Feb 2027
July 2027
Sept 2027
Project Initiation
Minor Activity 1
Minor Activity 2
Major Activity 1
Major Activity 2
Minor Activity 3
Minor Activity 4
Major Activity 3
Minor Activity 5
Major Activity 4
Minor Activity 6
Project Completion
Expected Outputs:___
Expected Outcomes: ___
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$150 K
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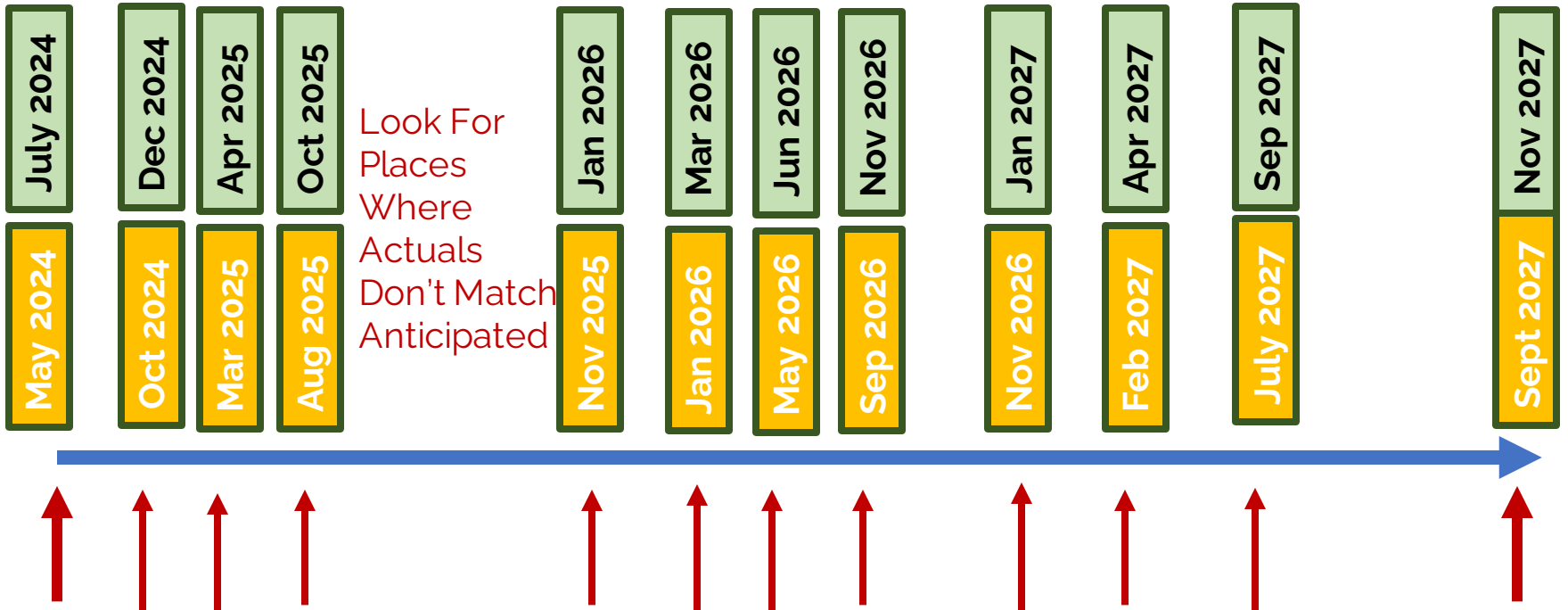

Project Initiatic

Major

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npletion

What Caused the Project to Go Off Schedule? Is There Any Way to Get the Project Back On Schedule?
Will the Slip in the Project Schedule Cause a Change in Costs? If So, How?
Will the Slippage in the Schedule Cause a Problem With Regulatory Compliance?

cted
uts:___

Expected Outcomes: ___

$80 K
$85 K
$350 K
$750 K
$150 K
$125 K
$550 K
$90 K
$250 K
$70 K
$2.5 M

Track Actual Costs Against Anticipated Costs

Task	Anticipated Costs	Actual Costs	Difference (Over or Under Budget)
Project Initiation			
Minor Activity 1	$80,000	$90,000	$10,000
Minor Activity 2	$85,000	$120,000	$35,000
Major Activity 1	$350,000	$425,000	$75,000
Major Activity 2	$750,000	$750,000	$0
Minor Activity 3	$150,000	$175,000	$25,000
Minor Activity 4	$125,000	$140,000	$15,000
Major Activity 3	$550,000	$550,000	$0
Minor Activity 5	$90,000	$100,000	$10,000
Major Activity 4	$250,000	$250,000	$0
Minor Activity 6	$70,000	$150,000	$80,000
Project Completion	**$2,500,000**	**$2,750,000**	**$250,000**

Track Actual Costs Against Anticipated Costs

Task	Anticipated Costs	Actual Costs	Difference (Over or Under Budget)
Project Initiation			
Minor Activity 1	$80,000	$90,000	$10,000
Minor Activity		00	$35,000
Major Activity		00	$75,000
Major Activity		00	$0
Minor Activity		00	$25,000
Minor Activity		00	$15,000
Major Activity		00	$0
Minor Activity		00	$10,000
Major Activity 4	$250,000	$250,000	$0
Minor Activity 6	$70,000	$150,000	$80,000
Project Completion	**$2,500,000**	**$2,750,000**	**$250,000**

If the Expenses Are Over Anticipated Costs, What Are the Reasons for the Over-expenditure? Is There Any Way to Get the Project Back on Track?
Is There an Impact On the Ability to Get the Project Completed At All? How Are Over-Expenditures Addressed?

Track Actual Costs Against Anticipated Costs

Task	Anticipated Costs	Actual Costs	Difference (Over or Under Budget)
Project Initiation			
Minor Activity 1	$80,000	$90,000	$10,000
Minor Activity 2	$85,000	$120,000	$35,000
Major Activity 1	$350,000	$425,000	$75,000
Major Activity		00	$0
Minor Activity		00	$25,000
Minor Activity		00	$15,000
Major Activity			$0
Minor Activity 5	$90,000	$100,000	$10,000
Major Activity 4	$250,000	$250,000	$0
Minor Activity 6	$70,000	$150,000	$80,000
Project Completion	**$2,500,000**	**$2,750,000**	**$250,000**

If Expenses Are Less Than Anticipated, What Can Be Done With the Extra Funds? Can Additional Work Be Done or Will the Money Be Returned?

As the Project Is Being Completed, Consider Whether the Anticipated Outputs and Outcomes Are Being Achieved

Is the Project Able to Meet the Desired Outputs and Outcomes? If No, Which Ones Won't Be Achieved and What Will Be Done About It?

If Yes, Measure the Ability
to Meet the Outcomes
and Measure the Outputs

Consider If Problems With the Budget or Schedule Have Impacted the Ability to Meet Project Outputs and Outcomes

Do you typically measure outputs and outcomes?

A Little Bit about Finance

Accounting, Bookkeeping, Reporting

Input

Output

Accounting Encompasses the Broader Responsibilities Over Developing and Maintaining the Financial Systems Under Which Bookkeeping and Reporting Functions Are Preformed

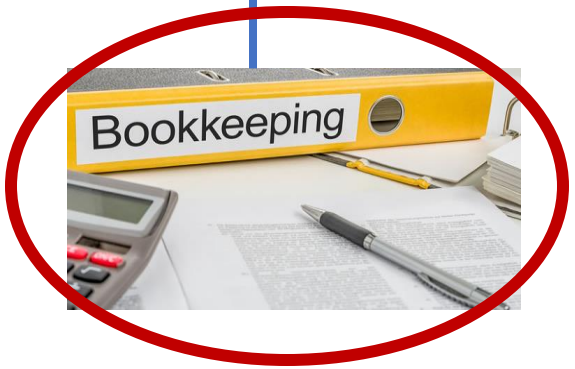
Input

Output

Accounting is Concerned With Timely and Accurate Recording of Transactions, Providing Useful Management Information, and Properly Reporting Such Information for Various People's Needs, Including Funders.

Input

Output

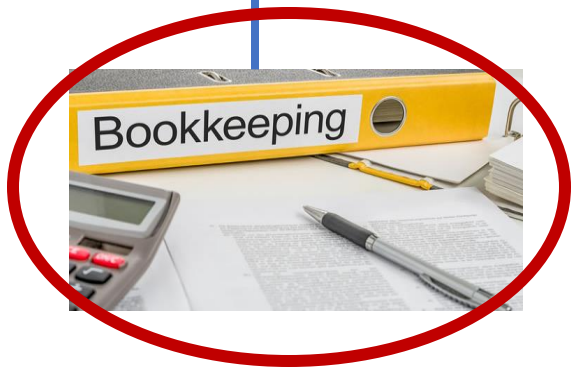


Goals of Bookkeeping:

Keep Track of Income and Expenses, Thereby Improving the Organization's Ability to Ensure More Money Comes in Than Goes Out (Revenues > Expenses)

Collect the Necessary Financial Information About the Organization's Business to File Required Reports

Input



Output

Bookkeeping Refers to the Actual Transactional Entering and Recording of Data. Examples Include: Writing Checks, Processing Payroll, Making Deposits, Recording Disbursements and Recording Receipts

Reporting: The Output of the Data Generated Through Various Bookkeeping Entries Is Used for Both Internal and External Purposes. Internal Reports Are Used Within the Organization By Management and Other Personnel. External Reporting Can Be Used By Individuals Outside the Organization.

The Financial Process

Cost Sharing and Matching

The Portion of the Project That A Recipient Contributes Towards the Project

May Be Required To Be in Cash or Sometimes In-kind Is Allowed

May Be Voluntary or Mandatory

Cost Sharing and Matching Paperwork

Must Be Documented

Must Be Documented in the Same Manner As Other Costs

Paperwork Supporting In-kind Must Be Kept

Progress Reports

Just About Every (If Not Every) EPA Project of Any Type Has Requirements for Progress Reporting, Many Other Agencies Do As Well

Sometimes It's Monthly, Sometimes Quarterly or Semi-annually

Check To See What the Requirement Is for Your Grant And What The Due Date Is (Usually 30 Fays following The End of The Reporting Period)

Establish A Means of Alerting You That A Report Is Due

Progress Reports

Try To Develop An Easy Way To Complete the Report So You Don't Have To Go Back in Time So Far To Figure Out What You Did

For Example, Have A Set Place To Write Down Any Significant Item That You Completed in the Week or Month

Have A Set Time Period To Take Note of What You Did, Say Once A Week

Have A Set Format To Complete Each Project Period So That it is Easier To Complete (Standardized Is Easier To Follow And Recreate).

Spending Grant Funds

Comply With Internal & External Regulations, Policies, and Procedures

Consider Audit Readiness for Every Transaction

Review Expenditures vs Budget on Every Transaction

No Supplanting or Cost-shifting

Spending Grant Funds

How Do You Become Aware of the Specific Requirements of the Grant?

Do You Have A Checklist or Any Other Process to Keep Abreast of the Requirements and Your Particular Role in Complying With Them?

Documentation

There Are Regulations That Govern How Projects, Grants, and Loans Are Managed, How Payments Are Made, When Payments Are Made, and Many Other Things. Know the Regulations *BEFORE* the Projects Starts.

Every Grant or Loan Has Specific Reporting Requirements That Should Be Understood and Followed

Questions?

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