

MASTER PLANNING

DR. NATACHA J. YACINTHE, PPM[®], AICP

AAPA, EXECUTIVE MANAGEMENT CONFERENCE

May 1-5, 2017

Port Administration Models : 4 Categories

- **Public Service Port** : the public Port Authority offers all the services required for the functioning of the seaport system
- **Tool Port** : the Port Authority manages the port infrastructure and heavy superstructure, with private cargo-handling companies providing commercial services
- **Landlord Port** : the Port Authority acts as a regulatory body and as a landlord. Port operations are carried out by private companies.
- **Fully Privatized or Private Service Port** : the port is privately owned, operated and sometimes self-regulated.

TYPICAL PORT FUNCTIONS

- Regulator of economic activities and operations
- Planning for future development
- Marketing and promotion of port services
- Operation of nautical services
- Supplier of cargo-handling and storage services
- Provider of ancillary facilities

WHAT IS PLANNING?

- **Planning** is the process of thinking about and organizing the activities required to achieve a desired goal.
- A plan is like a map.
- An important, albeit often ignored aspect of planning, is the relationship it holds to forecasting. Forecasting can be described as predicting what the future will look like, whereas planning predicts what the future should look like for multiple scenarios. Planning combines forecasting with preparation of scenarios and how to react to them.
- Planning is one of the most important project management and time management technique. Planning is preparing a sequence of action steps to achieve some specific goal. If ports plan effectively, they can reduce much the necessary time and effort of achieving the goal.
- When following a plan, a person can see how much they have progressed towards their project goal and how far they are from their destination.

DO WE NEED TO PLAN PORTS?

- Yes , why?
- No, why?
- Do we need to plan or fail if we don't?





The simple answer is that a Master Plan is important because it affects things you do every day.

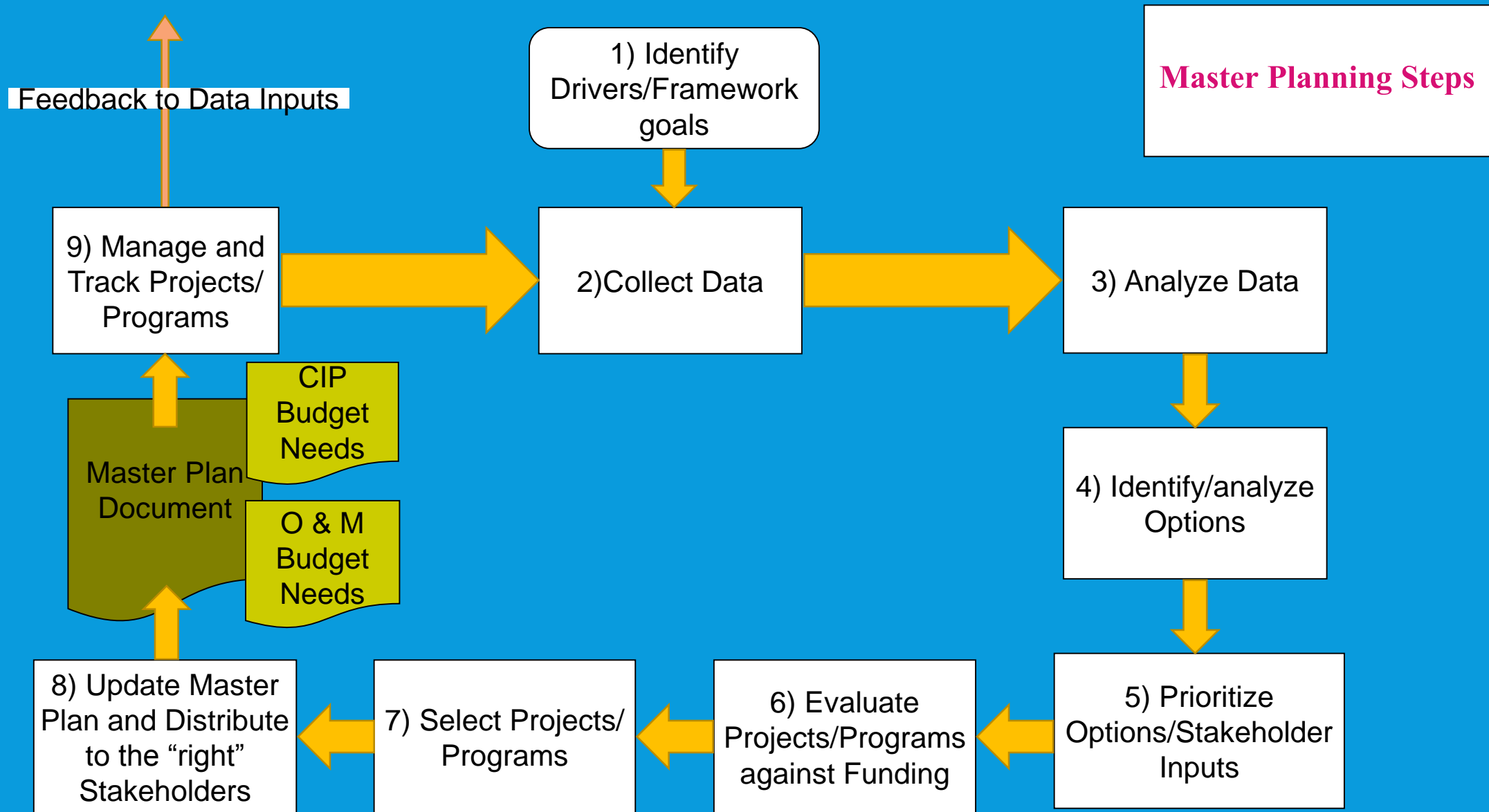
Master Plans guide Port decisions about important issues

MASTER PLAN AND PROCESS

- A Master Plan, also called a comprehensive plan, provides a long-range vision for the built environment of a community. Guides the appropriate use of lands/assets within a port in order to protect the public health and safety and to promote general welfare and increase growth and development.
- The Master Plan process is a continuous, cyclical and interactive process.
- The process yields feedback to inputs. Individual staff can be assigned to one of the Data Inputs, which becomes their area of responsibility.
- These staff form the “Master Plan Team.” The Master Plan Team should meet regularly to discuss updates and resulting impacts to the Master Plan Document and budget needs
- The planning process (1) identifies the goals or objectives to be achieved, (2) formulates strategies to achieve them, (3) arranges or creates the means required and (4) implements, directs, and monitors all steps in their proper sequence.
- Master Plan IS an up-to-date, dynamic, and useful decision-making tool.

WHY DO WE NEED A MASTER PLAN?

- The Master Plan establishes a shared vision and set of goals for a port.
- By Policy. By Law. Some states/local governments requires that ports have a Master Plan. Many stipulates that ports must update that plan at a minimum once every number years.



1. IDENTIFY COMMON DRIVERS

- To identify the reason(s) for developing a Master Plan and to formulate them into a set of measurable goals and objectives.
- Consider Management support for the developing the Master Plan
- Stakeholder support for developing the Master Plan
- Availability of resources for developing the Master Plan
- Availability and sustainability of resources for maintaining the Master Plan
- Typical drivers include the desire to have a comprehensive, cohesive plan for achieving organizational goals and objectives, including determining how to meet demand for growth and development, improve system performance, catch up on neglected maintenance, reduce capital and/or operating costs, balance funding with project needs, demonstrate the need for additional funding, etc.
- Growth and Development (changing growth patterns; changing projections;)
- Economic conditions (external) (recession;) – matching tenant/customer needs with economic reality
- Regulatory changes/International market changes
- Political changes
- Alignment with other local plans (Comprehensive Plans, State plans, Regional Water plans etc. etc.)
- Grants

2. COLLECT DATA: PORT'S FINANCIAL INFORMATION

- Data Input:
 - To collect data and information on and about your port in order to prioritize needed programs or/and projects
- Capital Needs
- Operations and Maintenance needs
 - · Revenue/profits (past, existing, and anticipated future)
 - · Rates
 - · Bond cycles
 - · Grant opportunities
- Remember to consider accuracy of data and frequency of updates

2. COLLECT DATA: STRATEGIC DIRECTION

- Vision (What is the Port's vision?)
- Mission (What is the Port's mission?)
- Goals
- Objectives
- Key Performance Indicators (measures progress toward Goals)
- Typical Data Sources
 - Executive Management Staff
 - Strategic initiatives or goals
 - Key Performance Indicator Report

2. COLLECT DATA: PORT OPERATIONS/ASSETS

- Asset Management Plan
- Existing Condition Assessment/Regional settings
- Inventory Assets
- Business Risk Exposure(BRE)
- Appropriate capital investment plan/funding strategy
- Ensure that the Master Plan considers all of the Organization's assets
- Ensure the Asset Management Plan informs the Master Plan of demand-based needs

2. COLLECT DATA: FORECASTING/PROJECTIONS

- Population projections
- Vessel/Service Forecast
- Shifting Trades/ Trade Lanes
- Long term global economic trends
- Structural economic changes
- Supply chain analysis
- Container, Bulk cargo forecasts /Cruise Market assessment/forecasts
- Assumptions

2. COLLECT DATA: DRIVING REGULATIONS

- Current regulations and requirements e.g. North American Emission Control Area (ECA) (marine vessels fuel Sulphur standards) and ILC rulemaking
- Anticipated future regulations, dates and requirements
- Maintain spreadsheet of existing regulations, requirements, and dates and maintain listing of anticipated future regulations, requirements, and dates.
- Participate in relevant State and Regional discussions about anticipated regulations and requirements.
- Assess impacts of new regulations to system operations and development.

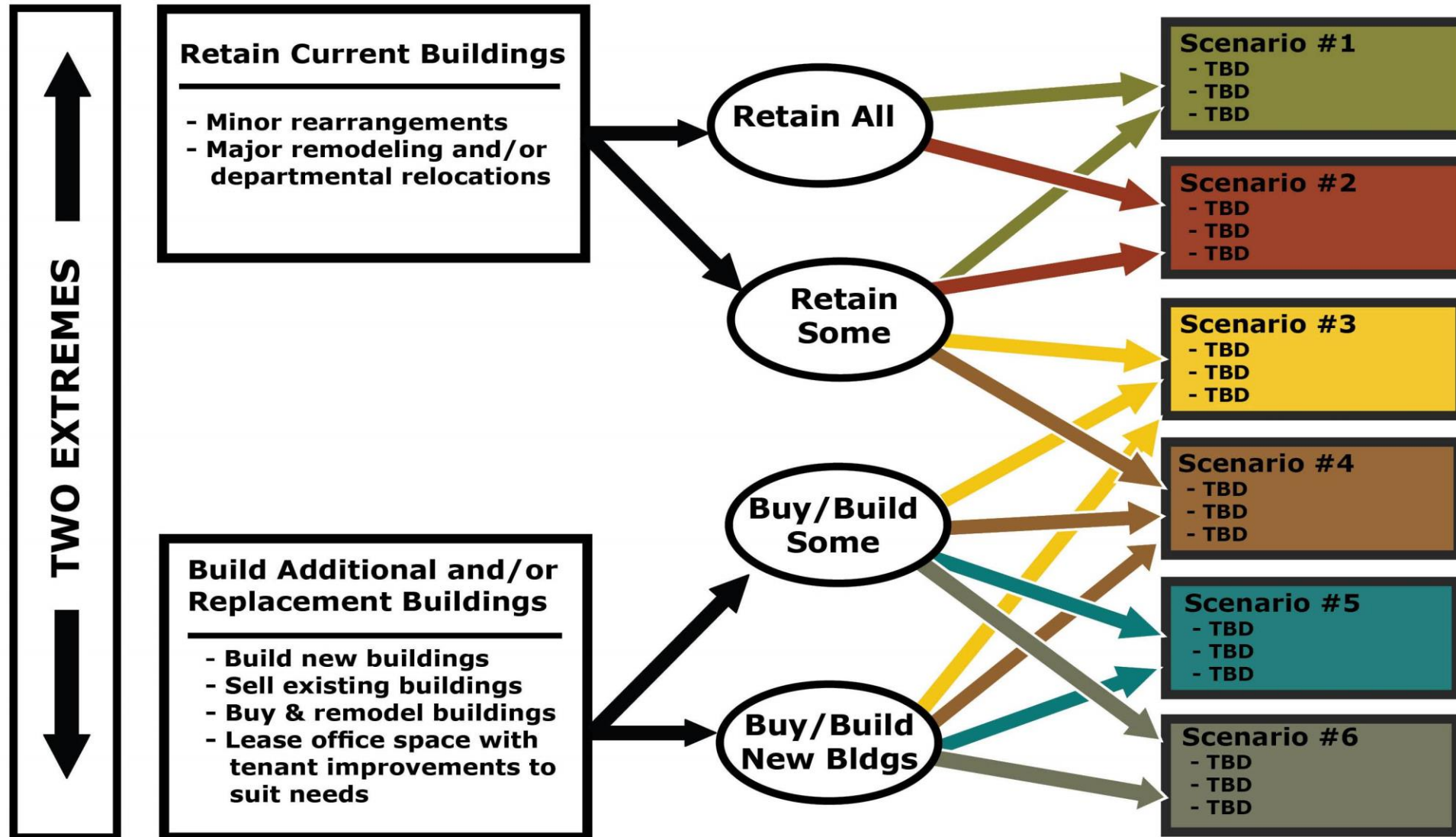
3. ANALYZE DATA

- The purpose of this step is to convert and process the collected data to a way which directly indicates the current state of port operations
- Existing condition assessments and the future conditions that will drive changes in port operations and policy
- Compile data
- Use historical data to develop/determine relationships between regional and national characteristics
- Estimate the likelihood of failure and remaining useful life of critical of assets

4. IDENTIFY/ANALYZE OPTIONS

- To identify options that support anticipated growth and development and that meet expected levels of service and strategic goals
- Scenario Development
- Executive Management Directives
- Political/Stakeholder will
- ROI analysis

SCENARIO DEVELOPMENT



5. PRIORITIZE OPTIONS/STAKEHOLDER INPUT

- In this step of the process we prioritize the Projects recommended for action under -Identify/Analyze Options.
- Identify the criteria to be used for comparing/prioritizing Projects/Programs
- Apply the process and criteria to the Projects/Programs
- Determine if the resulting prioritization makes sense based on professional judgment
- Modify the process and criteria until the resulting prioritization aligns with professional judgment
- Refine the process and criteria over time to improve the results
- Obtain Operations group input to the prioritization process. Planners speak to Operations colleagues

Considerations

- Mission Statement; Organizational Goals & Objectives
- Stakeholder Analysis/Required Project Sequencing
- The process and criteria may only take you so far and then professional judgment or executive decision-making may have to take precedence

6. EVALUATE PROJECTS AGAINST FUNDING

- Some seaports consider this part, the “Affordability Analysis” process
- Identify operating budgets
- Identify needed capital
- Assess bond needs
- Assess rates to cover the expenses or repay the bonds
- Assess whether state revolving funds are available if applicable
- Assess whether grants are available
- Assess combinations of funding strategies
- Possible revenue streams include bond programs, pay as you go alternatives, grants, concessions and public-private partnership alternatives.

7. SELECT PROJECTS

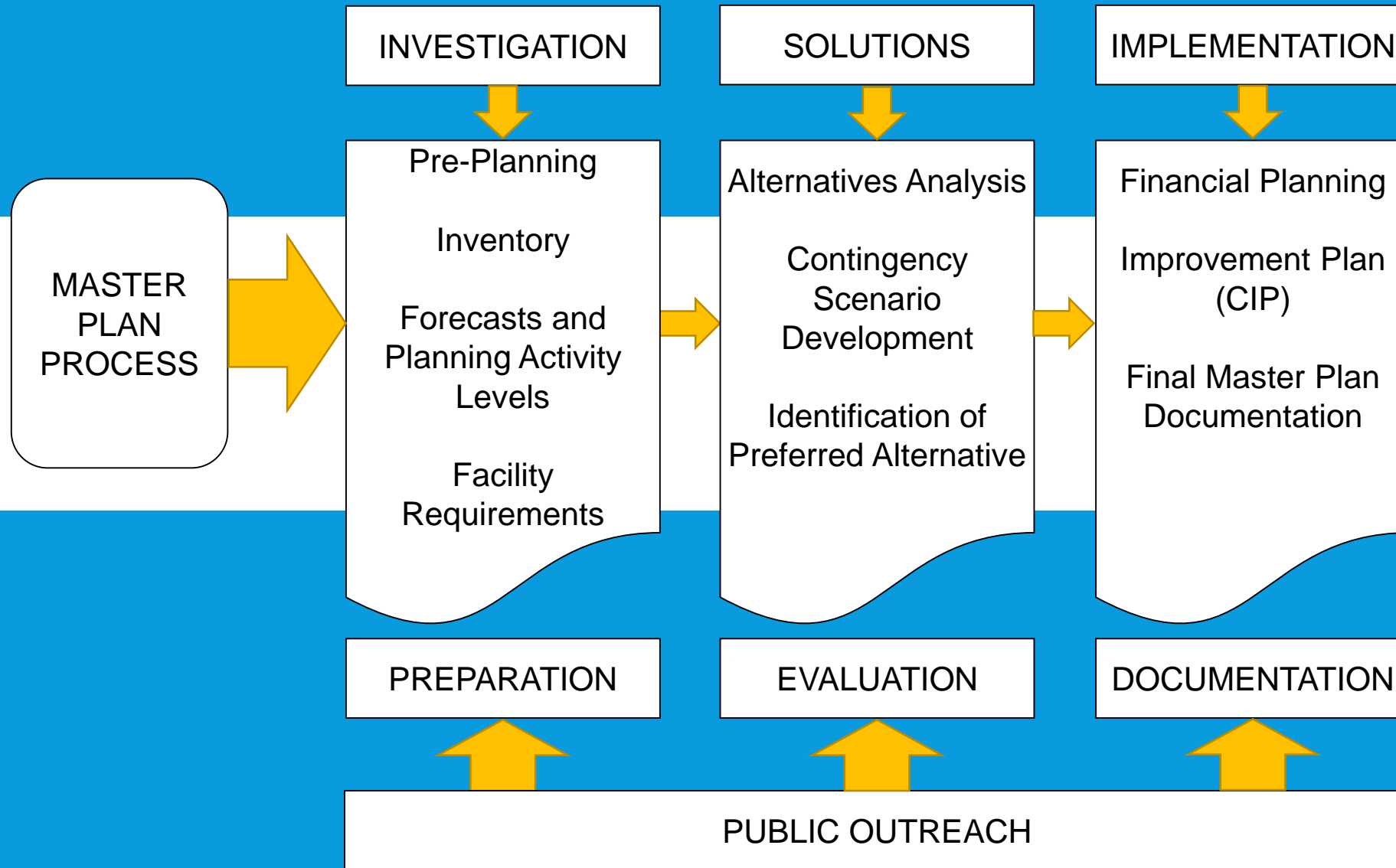
- To recommend an alternative for implementation from the list of alternatives defined in Process Step 6 (Evaluate Projects against Funding)
- Present an implementation plan for the selected projects. Select projects for implementation based on the results of the financial evaluation presented in Step 6
- Explain the rationale behind the alternative selected.
- Selection could be based on least cost. However, the selection of an alternative could also be driven by public acceptance or environmental benefits
- Develop or update Capital Improvement Plan (CIP) budgets to include selected projects, their anticipated costs, and their target installation/implementation dates
- Develop a schedule to match funding
- Considerations: Uncertainty in projected revenue (slower growth)

8.UPDATE MASTER PLAN/ DISTRIBUTE TO STAKEHOLDERS

- Option to hold public meeting prior to or after legislative consideration
- Distribute Master plan draft to the right stakeholders
- Incorporate edits that need to be made to the Master Plan Document as a result of changing conditions and communicate those changes to Stakeholders.
- Make text edits to the Master Plan Document/Maintain a version history and why changes were made
- Establish a document management and distribution plan. There are 800-pages plan out there

STEPS 1 TO 8 ENGAGE, ENGAGE, ENGAGE

- Helps to develop a prioritized list of projects based on technical, data-driven analysis and stakeholder input
- Engaging the “right” stakeholders.
- Does everyone need a sit at the table?
- When a Master Plan is being developed, it is an opportunity to engage stakeholders and the public and elevate strategic planning. Engaging the right stakeholders can lead to more efficient and informed decision-making and consequently, a more sustainable, comprehensive, and usable Master Plan



BEST PRACTICES: GLOBAL VIEWS

- Regardless of the methodology used to develop port master plans, it is very clear that we must move away from port master plans being developed in isolation – simply addressing ‘within boundary’ issues.
- Broader, ‘whole of network thinking’ is becoming more and more evident in the global seaport industry.
- MP undertaken by Port Metro Vancouver (via ‘scenario testing’)
- Port of Dublin (via the inclusion of a parallel ‘strategic environmental assessment’ of the Master Plan) provide valuable examples.

BEST PRACTICES: AUSTRALIA

- Port master planning must be based on a ‘beyond the port’ methodology, rather than the traditional ‘introspective’ approach;
- Policy alignment must be achieved through National-State-Region-Local planning frameworks
- Port master planning frameworks should be generally consistent between jurisdictions
- Enhanced governance support must be provided at the jurisdictional level and within organizations, to assist with comprehensive port master planning
- Land Use Plans, Development Codes must support the Master Plan at the operational, ‘on the ground’ level
- Regulatory/policy frameworks regarding ‘strategic assessments’ of master plans should be further examined to improve the identification, protection and management of environmental values and to address the need for regulatory streamlining.

BEST PRACTICES: AUSTRALIA



Broader considerations essential during port master plan development

BEST PRACTICES: VANCOUVER

collaboration with key stakeholders via scenario-building workshops and ongoing dialogue.

- Ultimately, 4 scenarios were developed:
- ‘Local Fortress’ (gateway growth constrained, focus on regional economy, local resilience and well-being)
- ‘Missed the Boat’ (emerging market growth is strong, but the gateway misses opportunities and doesn’t live up to expectations, due to supply chain issues, poor coordination, lack of community support and diminishing industry support, etc)
- ‘Rising Tide’ (continued growth, but in a context of increased volatility due to resource conflicts and climate instabilities)
- ‘The Great Transition’ (a paradigm shift in the industry – a rapid transition to a post-industrial/post-carbon model)

BEST PRACTICES: DUBLIN PORT

- Port of Dublin Strategic/master planning undertaken at the Port of Dublin provides example of a comprehensive master planning ‘plan-making approach’.
- Key features of the master plan were the Strategic Environmental Assessment (SEA) process
- The inclusion of the SEA as part of the master planning process provides a contemporary example of broader consideration of key spatial and environmental issues – beyond the port’s defined boundaries.

BEST PRACTICES: DUBLIN PORT (CONTINUES)

- Plan for future sustainable growth and changes in facilitating seaborne trade in goods and passenger movements to and from Ireland and the Dublin Region
- Provide an overall context for future investment decisions
- Reflect and provide for current national and regional guidelines and initiatives
- Ensure there is harmony and synergy between the plans for the Port and those for the Dublin Docklands Area, Dublin City and neighboring counties within the Dublin Region
- The master plan's foundation is detailed capacity and demand analysis – which in turn allows a staged approach to development in forward years.
- The Dublin Port Company has also made it very clear that ‘societal integration’ is a key issue – with a primary master plan aim of ‘reintegrating’ with the city of Dublin after many years of separation and fragmentation.

BEST PRACTICES: PORTS OF AFRICA

- **Kenya:** Preparation of interim integrated regional development plans where the lead planner is an “embedded lead expert”
- **Ghana:** The use of community labor and local materials as counterpart contributions to project implementation. The use of peer review and learning sessions among and between communities
- **Mauritius:** Review of the Development Strategy to further integrate infrastructure (road, water, electricity, sewerage) with planning. The establishment of a state-of-the-art digital cadaster for the island, which would assist in the efficient management of land resources. The cadaster links attributes of plots of land, values of the plots and their title deeds in an aerial-photo map base.
- **Uganda:** The declaration of special planning areas, for example, the Albertine Graben Physical Development Plan in a new oil-drilling region. Specific plans for disaster prone areas, such as the mountainous areas of Elgon.

NIGERIAN PORTS AUTHORITY (NPA)

- Port sees their business as international and, therefore, requires that they constantly keep abreast with global developments and cutting edge technology in shipping developments.
- Introduced the Port Service Support Portal (PSSP) to streamline/reduce lag in time of doing business
- Re-assessing existing national and procurement policies pertaining to the port

BEST PRACTICE IN MASTER/VISION PLANNING

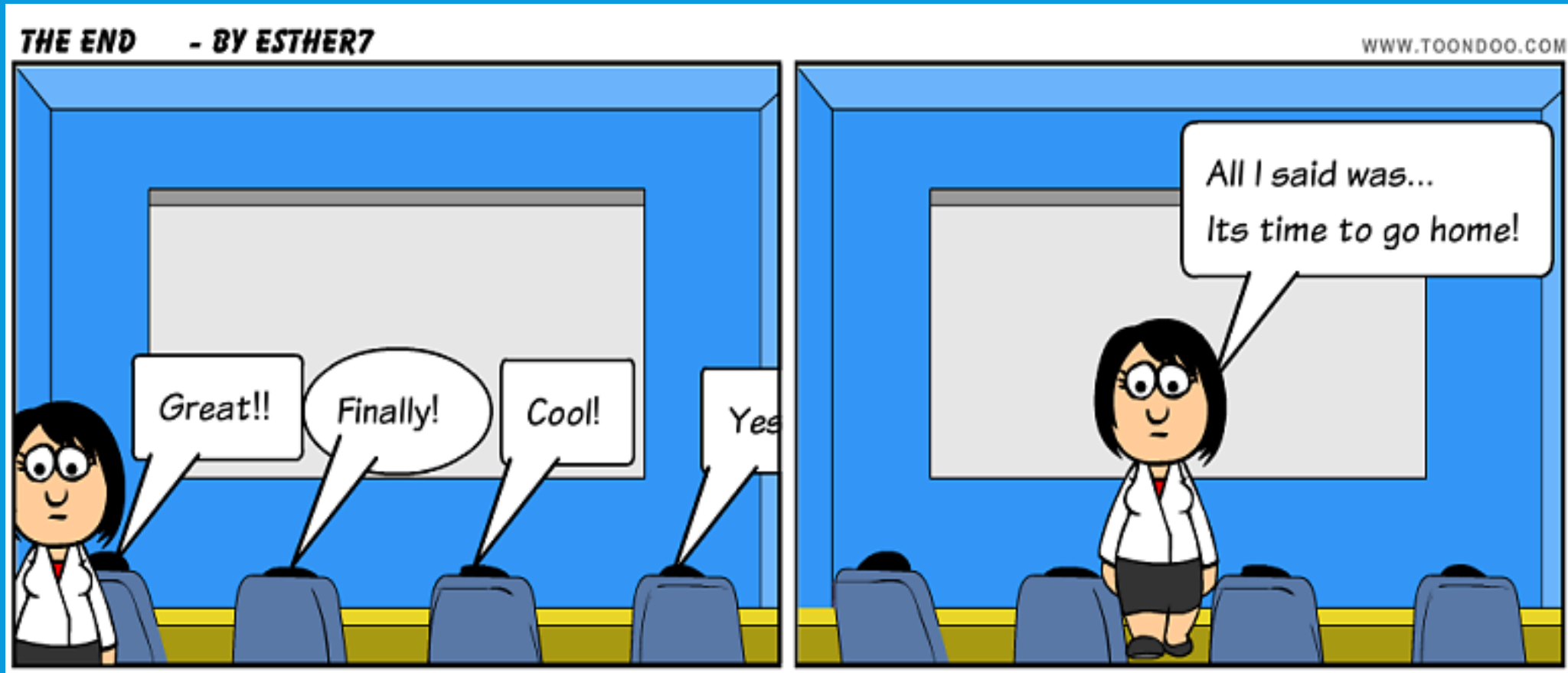
- While every port is unique, a general “best practice master planning” approach, can be applied to Master planning efforts. The “best practice” approach shows that when developing or updating a Master Plan, a series of processes and data inputs must be considered.
- Some of these inputs are documents/efforts already in existence at certain ports, and some can be developed specifically for the Master Plan.
- Keeping in mind:
 - The global/regional context of the proposed investment
 - Investment plans
 - The integration of individual master plans at the local, state or national level

BEST PRACTICE IN MASTER/VISION PLANNING

- **Planning is a Ongoing Cycle**
 - Develop a Process for Plans to Evolve with Changing Business Needs
- **Information Management**
 - Develop Strategy Upfront as to How Information Will be Managed and Maintained
 - Simple is Better
- **Corporate/Executive Alignment**
 - Always be Able to Communicate How the Plan is Actively Supporting Ongoing Port Strategies and Initiatives
- **Know your Finance Masterplan Team members**
 - Stay in the Know Regarding Organizational Finances
- **Execution**
 - Must be Able to Deliver on Plan Effectively. Remember, Have fun!

THANK YOU.

QUESTIONS?





NYACINTHE@BROWARD.ORG

(954) 468-0213

GROUP QUESTIONS

1. WHO IS THE FATHER OF PLANNING/ PORT MASTER PLANNING?
2. WHAT IS THE 4TH STEP IN THE MP PROCESS?
3. WHAT IS THE FINAL STEP IN THE MP PROCESS?
4. FOR GLOBAL BEST PRACTICES NAME 1 COUNTRY
5. 1 EXAMPLE OF A PORT MODEL