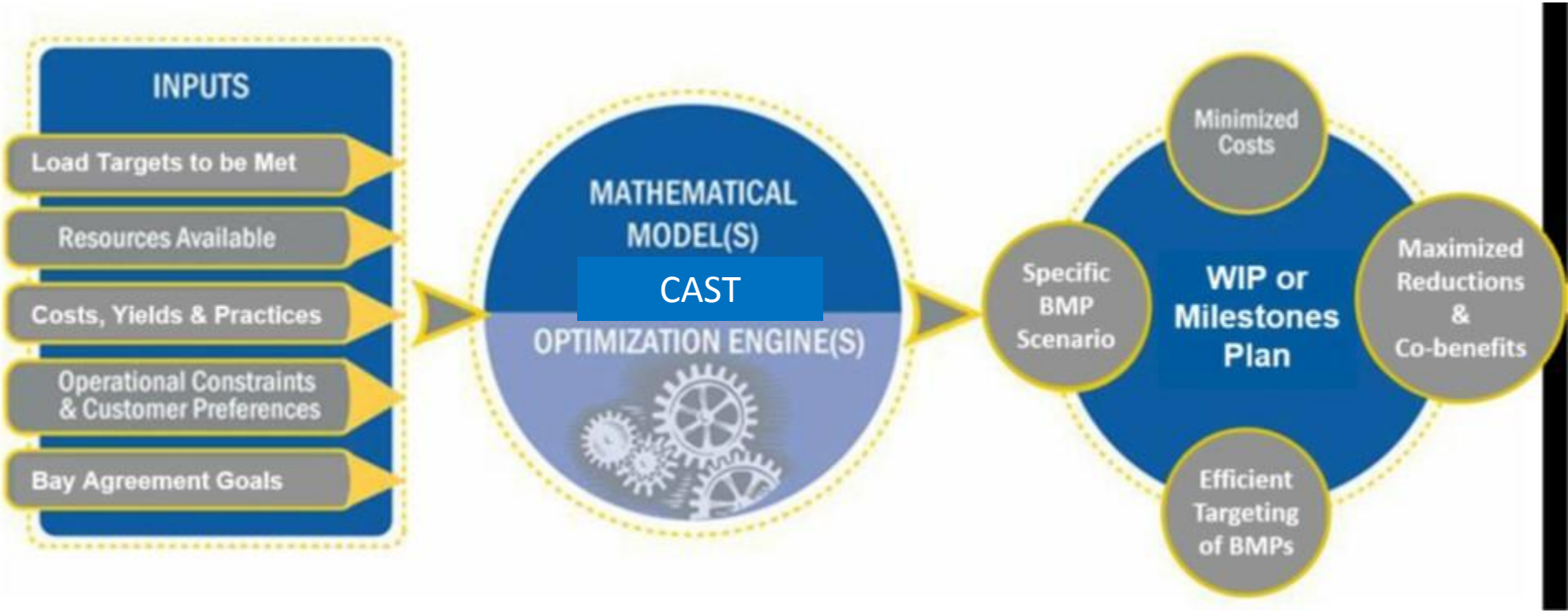
Optimization Functionality in P6 CAST

WQGIT

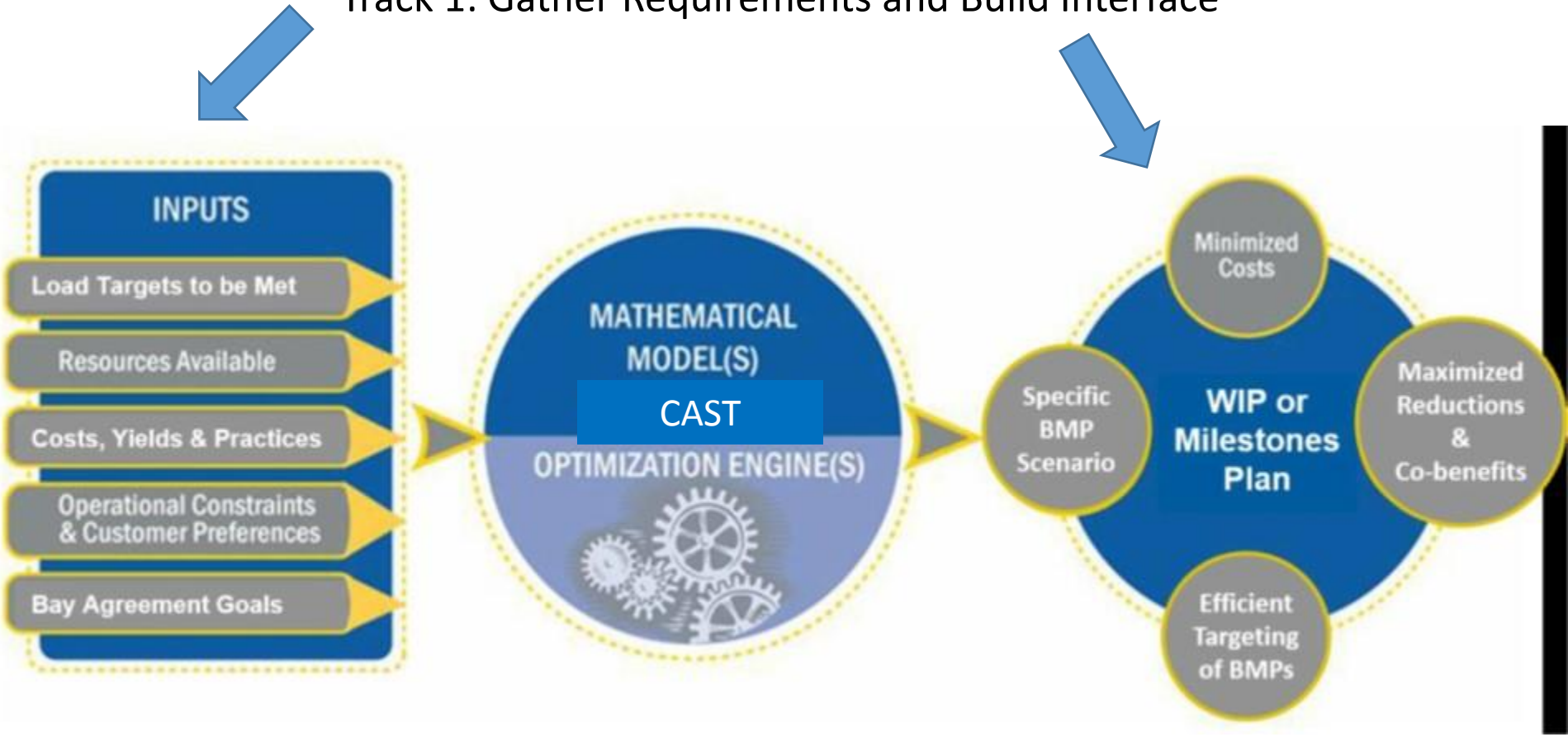
Gary Shenk and Bill Ball

2/13/17

Graphic from STAC workshop



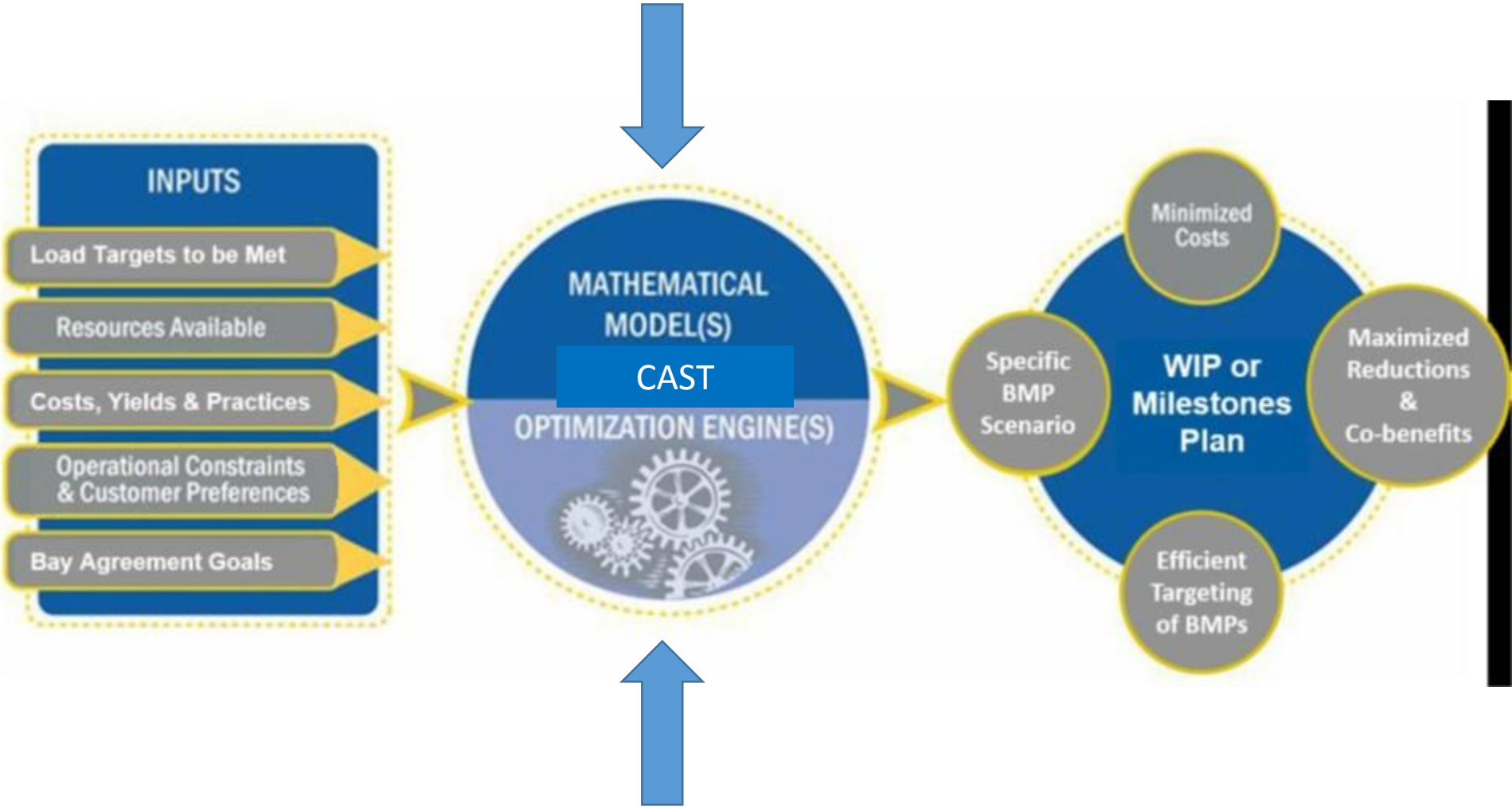
Track 1: Gather Requirements and Build Interface



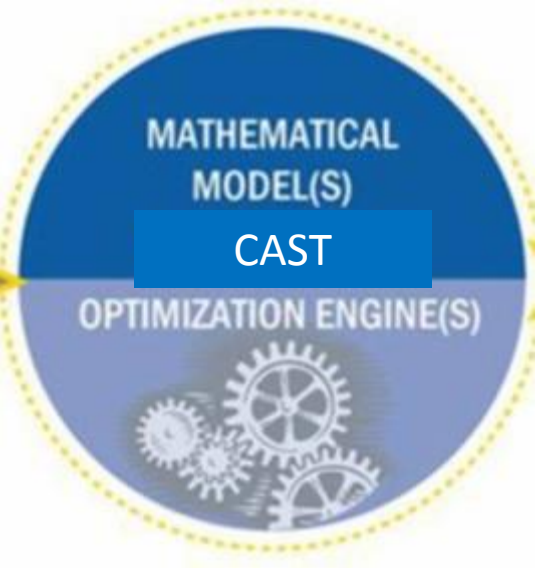
Track 1: Gather requirements and build interface

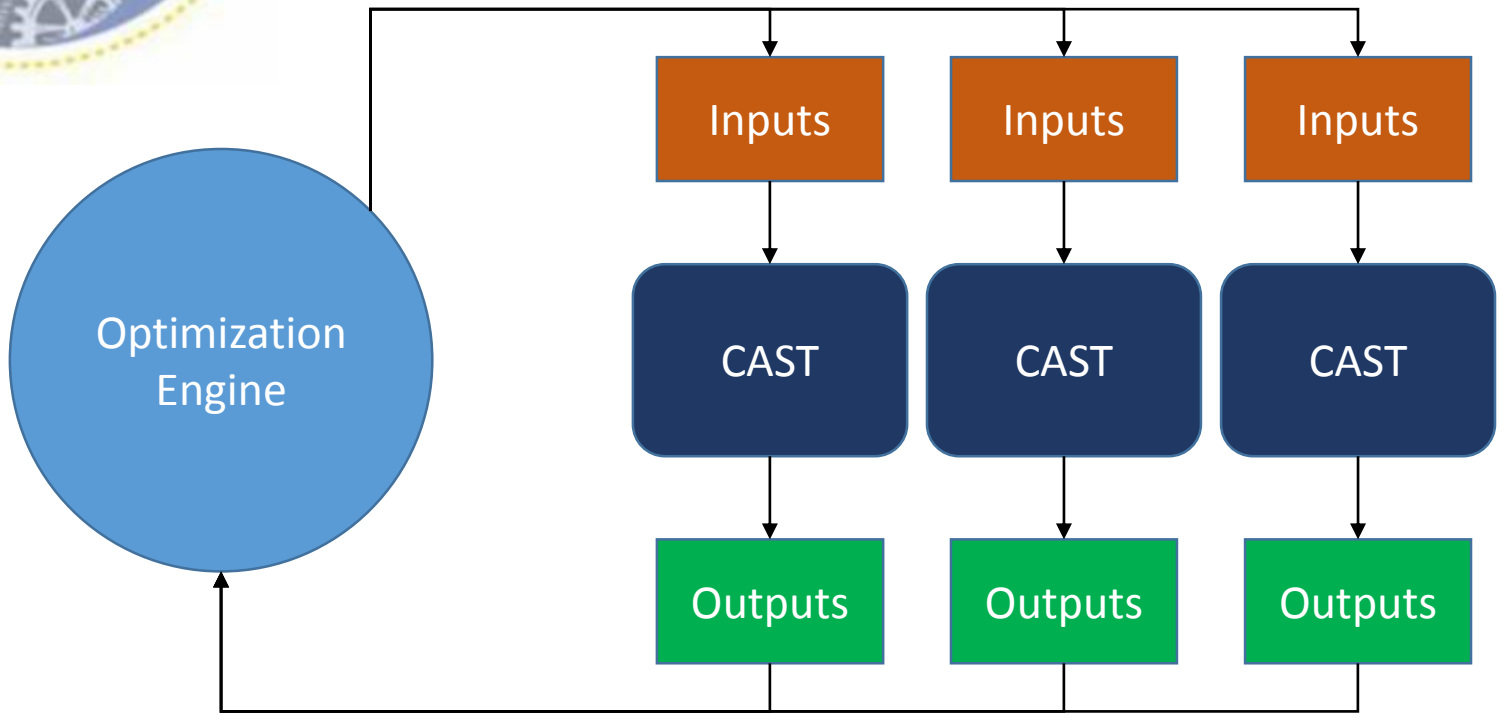
- Good input from the STAC workshop
- CAST interface will be the basis
- Olivia Devereux to coordinate

Track 2: Finish Phase 6 CAST and Create Parallel Version



Track 3: Design Optimization Method


MATHEMATICAL
MODEL(S)
CAST
OPTIMIZATION ENGINE(S)


Optimization
Engine
Inputs
Inputs
Inputs
CAST
CAST
CAST
Outputs
Outputs
Outputs

Track 2: Complete Phase 6 CAST

- Due for release with Draft Phase 6 model
- Summer-Fall 2017 – recode in python to allow for parallelization
- Fall 2017 – Build ‘flat’ database
- Fall/Winter 2017 – move to Cloud

Track 3: Design Optimization System

- Convene Advisory Support Committee (done)
- Hire CBPO-based Optimization Expert (in process)
- Investigate optimization problem
- Select method and software
- Implement system

Advisory and Support Committee

- Darrell Bosch – Virginia Tech
- Hugh Ellis – Johns Hopkins
- Ben Hobbs – Johns Hopkins
- Art McGarity – Swarthmore
- Stu Schwartz – U Maryland Baltimore County
- George van Houtven – Research Triangle Institute

Schedule

- Mid-2017 – Start a stakeholder advisory group.
- Late 2017-2018 – communication of findings through exploration of CAST
  - Cost effectiveness rankings – extent - local
  - Co-benefits as a printable table

Schedule

- Early 2018 – First version of CAST optimization. Will likely be limited in scope
  - County-scale
  - Perhaps limited to fewer BMPs
  - Unlikely to have much in the way of co-benefits
- 2018 – early 2019 and beyond – updates with additional functionality.