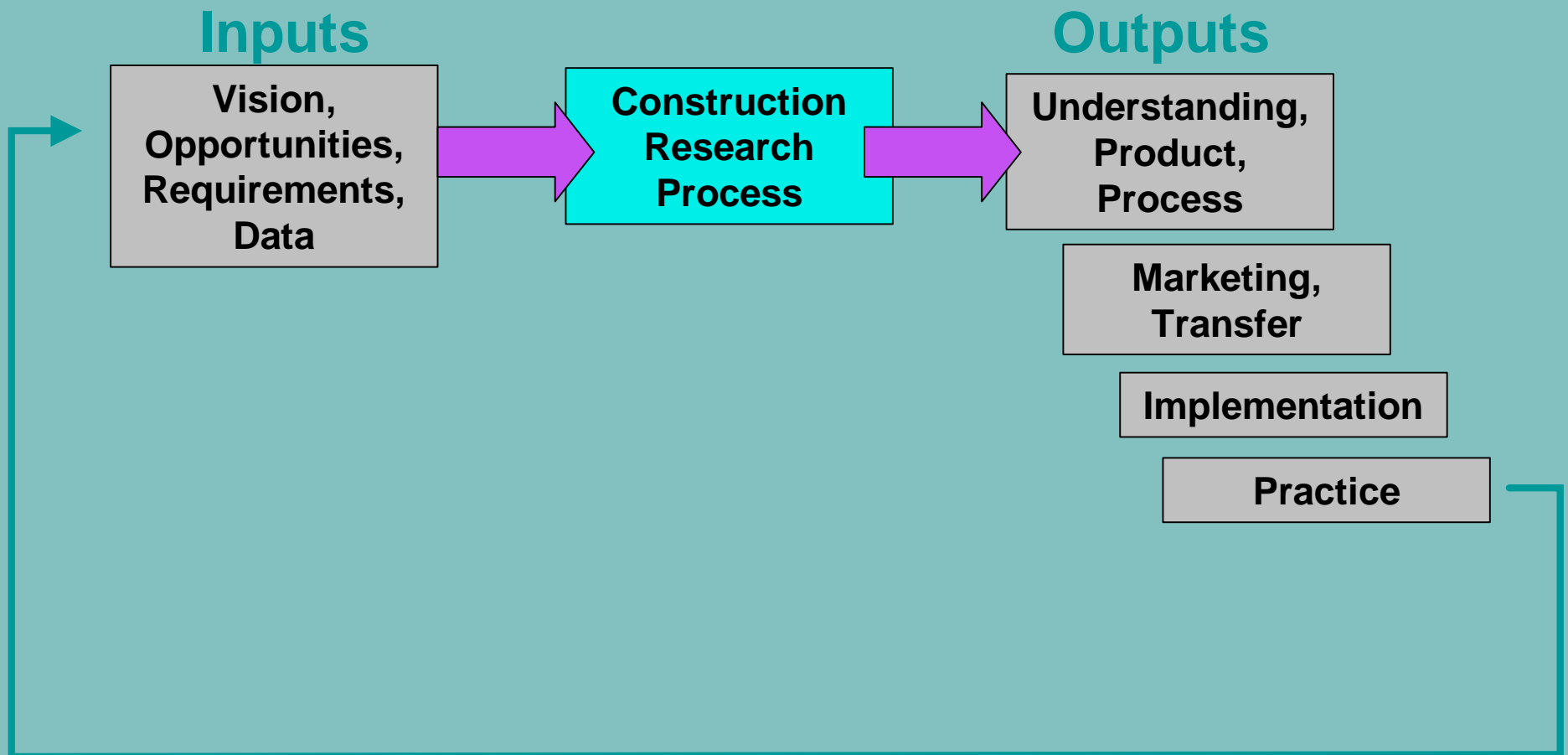


Inputs and Outputs





Inputs

NEEDS

- Faster, Better, Cheaper, Safer
- Reduction of delivery time by x%
- Cost reduction by x%
- Reduced accidents...
- Increase durability/flexibility
- Increase performance
- Reduce/take advantage of risks
- Environmental
- Improve perception of CE profession

OPPORTUNITIES

- Learning from other industries
- New materials
- E-commerce/IT/4D
- VR
- New production theories
- Robotics

DATA

- Data mining
- Case studies
- Current practices
- Industry concerns



Outputs

UNDERSTANDING (Formalized knowledge)

- Understanding managerial principles
- Engineering
- Ergonomics
- Process interdependencies

PRODUCT AND PROCESS

- New, improved construction products, processes, tools
- Integrated systems
- Materials
- Design for X
- Delivery processes

MARKETING AND TECH. TRANSFER

- Government tech transfer programs
- “ENR’s”
- Journal Papers????
- Show case projects
- Proactive action
- Hire communications people
- Champion building