

# Teaching Systems Thinking

## In Career and Technical Education

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# By the end of the workshop...

- Participants will be able to:
  - Introduce systems thinking concepts in ways that are accessible and relevant to CTE students
  - Design learning experiences that promote inquiry, problem solving, and cross-disciplinary thinking
  - Coach student to move beyond step-by-step thinking and take initiative in complex situations
  - Support students in building confidence to trust their observations, ask questions, and contribute to team-based solutions

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**Vocational (Career and Technical) education programs have made a real difference in the lives of countless young people nationwide; they build self-confidence and leadership skills by allowing students to utilize their unique gifts and talents.**

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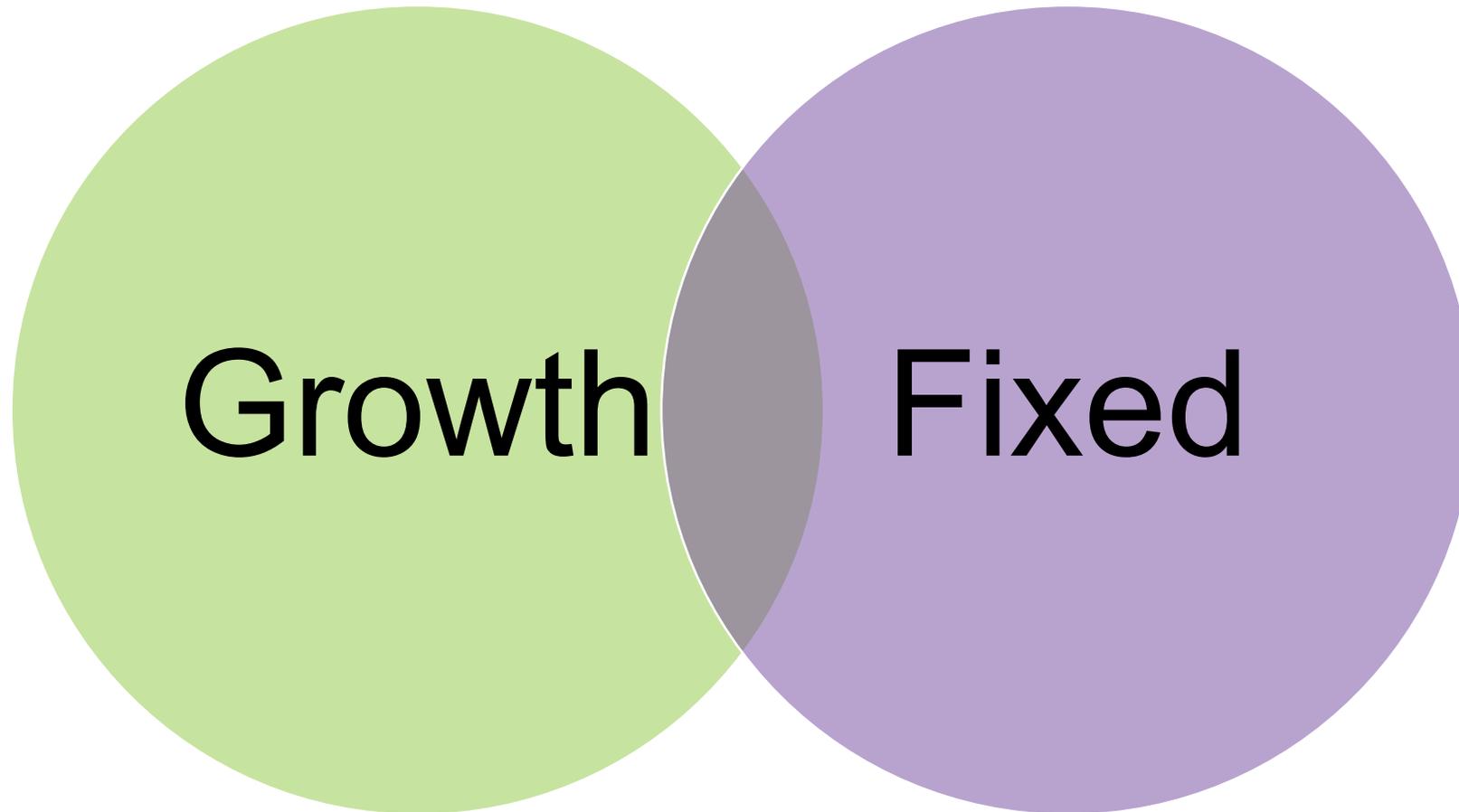
Conrad Burns

# Systems Thinking

- An approach to understanding complex problems by looking at how different parts of a system interact and influence each other, rather than viewing them in isolation.
- Systems thinking focuses on:
  - Interconnectedness: Recognizing that components of a system are linked
  - Relationships and feedback: Understanding how changes in one part affect others
  - Patterns over time: Looking beyond immediate events to see trends and root causes



# Systems Thinking and Mindset



# Guiding GROWth Model

- **G**oal
  - What do you want to achieve?
- **R**eality
  - Where are you now?
- **O**ptions
  - What could you do?
- **W**ill
  - What will you do?



# Guiding GROWth Model in Systems Thinking

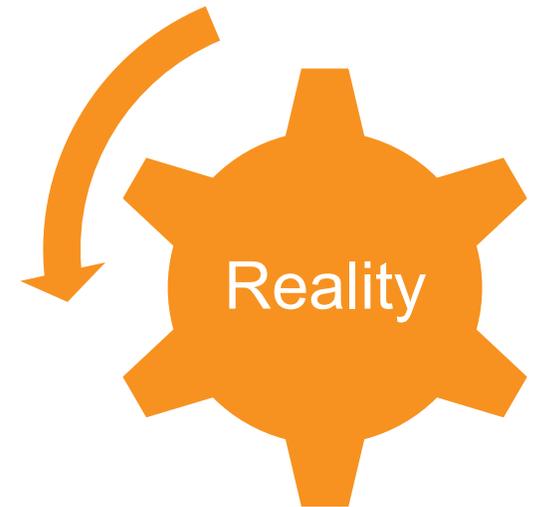
- **Goal**
  - What do you want to achieve?
  - What outcomes do you want to create in the system?
    - Define a goal that acknowledges
      - *Who else is impacted?*
      - *What processes are involved?*
      - *What constraints or conditions matter?*
      - *What does success look like in the broader system, not just one task?*



# Guiding GROWth Model in Systems Thinking

## ■ Reality

- What is happening now?
- What does the current system look like, and how do its parts interact?
  - Explores the current situation, challenges, and context
    - *What is happening now?*
    - *What have you tried so far?*
    - *What are the key components of this system?*
    - *What depends on what?*
    - *Where do delays, errors, or miscommunications usually occur?*
    - *What patterns do you notice?*



# Guiding GROWth Model in Systems Thinking

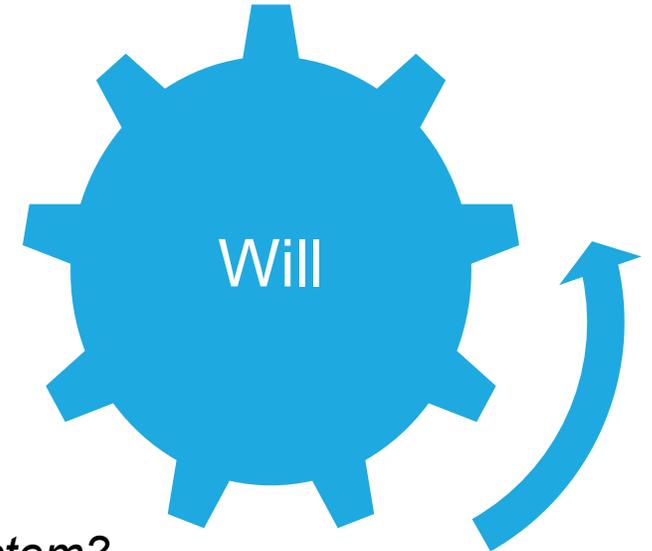
- Options
  - What could you do?
  - What leverage points in the system?
    - Brainstorming phase to explore possibilities and alternatives
      - *What are your options?*
      - *What else could you try?*
      - *Who could help you?*
      - *If we adjust a step, what else changes?*
      - *What options reduce problems?*
      - *What is the impact of doing it this way versus that way?*
      - *What options strengthens the whole system?*



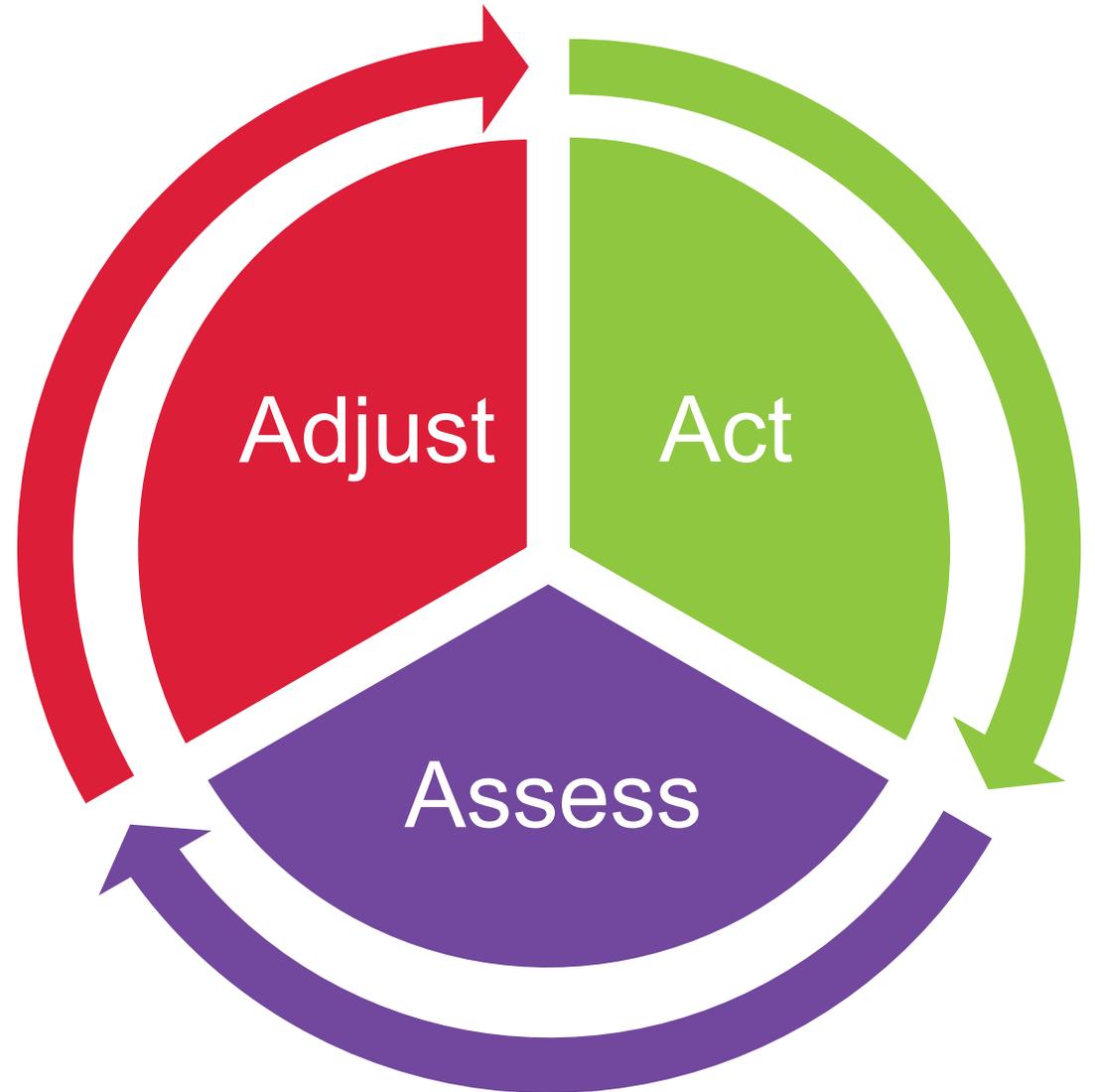
# Guiding GROWth Model in Systems Thinking

## ■ Will

- What will you do next?
- How will you act with the whole system in mind?
  - Commitment and action planning
    - *What will you do next?*
    - *What support do you need?*
    - *How will you check if it improved the overall process?*
    - *Who else needs to know about your plan?*
    - *How will you gather feedback from other parts of the system?*
    - *What indicators will show that the system is working better?*



# Developmental Feedback



“

**A bad system will  
beat a good  
person every  
time.**

”

W. Edwards Deming

# Thank You!

Join us later today:

**11:30 Industry to Instruction**

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Sarah Weisbarth, Director

