

PROJECT MANAGEMENT FOR SCIENTISTS

SCIENTIFIC VISIONS & STRATEGIES

CHRISTOPH U. KELLER, C.U.KELLER@UU.NL

STERREKUNDIG INSTITUUT UTRECHT

UTRECHT UNIVERSITY

WWW.ASTRO.UU.NL/~KELLER

OUTLINE

- Vision, Strategy, and Tactics
- Scientific Visions
- Vision Requirements
- Strategic Thinking and Planning
- Strategic Analysis (SWOT)
- Strategic Goals (SMART)
- Tactics

VISION, STRATEGY & TACTICS

- Vision: a dream that may never be reached, concentrates on the future, inspires, provides clear decision-making criteria
- Strategy: pro-actively planned long-term actions to reach a well-defined (strategic) goal
- Tactics: short-term reactions to externally driven events to stay on the fastest path to the goal

SCIENTIFIC VISIONS

- Dream
- Imagination (“Imagine a day when ...”)
- Sudden insight
- Idea
- Discovery
- Thought
- ...

VISION REQUIREMENTS

- Clear (unambiguous)
- Inspiring (a bright future)
- Engaging (people want to join)
- Possible (not impossible)

STRATEGY

Strategy makes a vision come true

1. Analyze the current situation
2. Define (strategic) goals that bring you closer to achieving your vision
3. Map route(s) to those goals

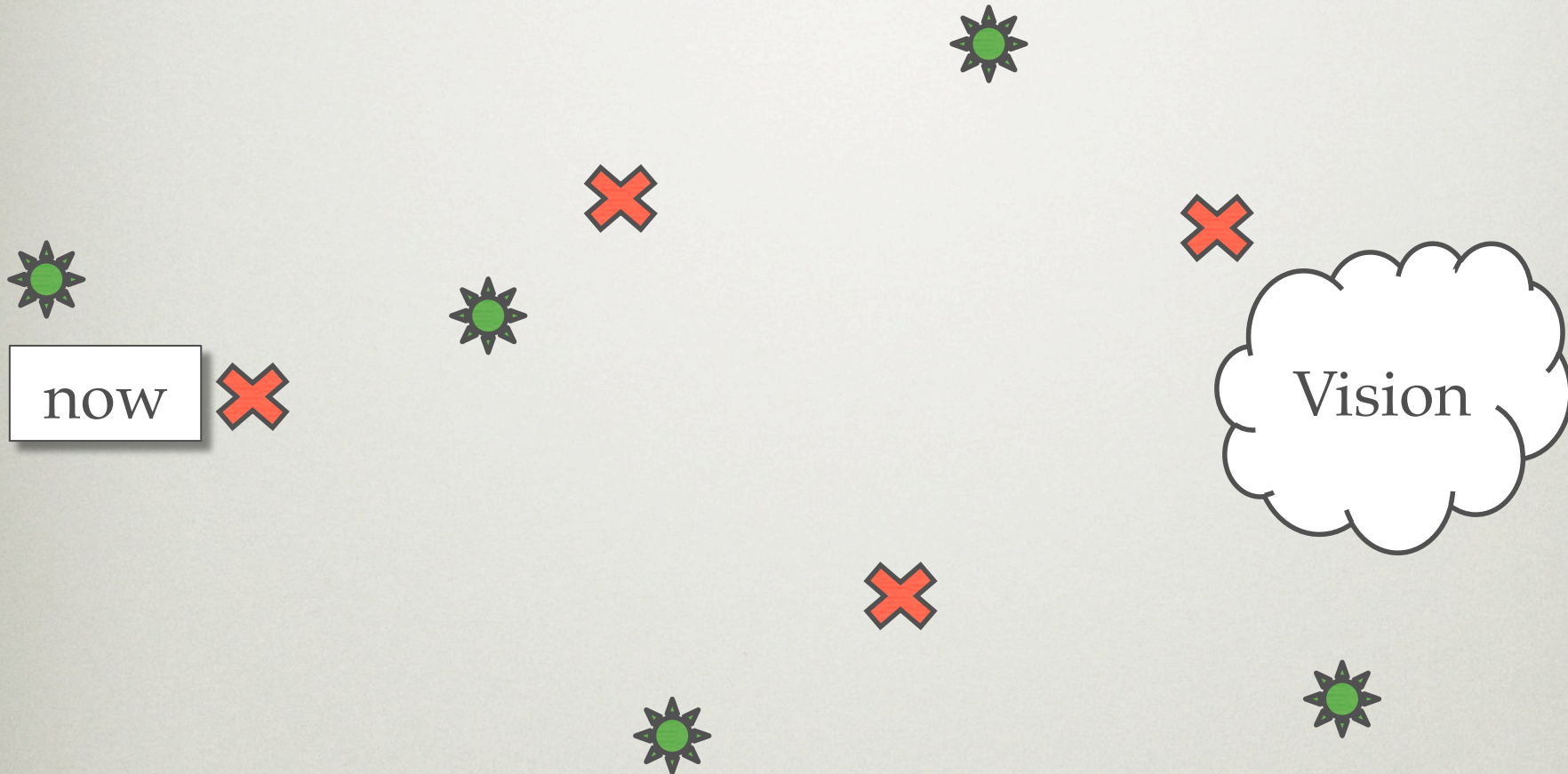
STRATEGIC PLANNING: VISION

now

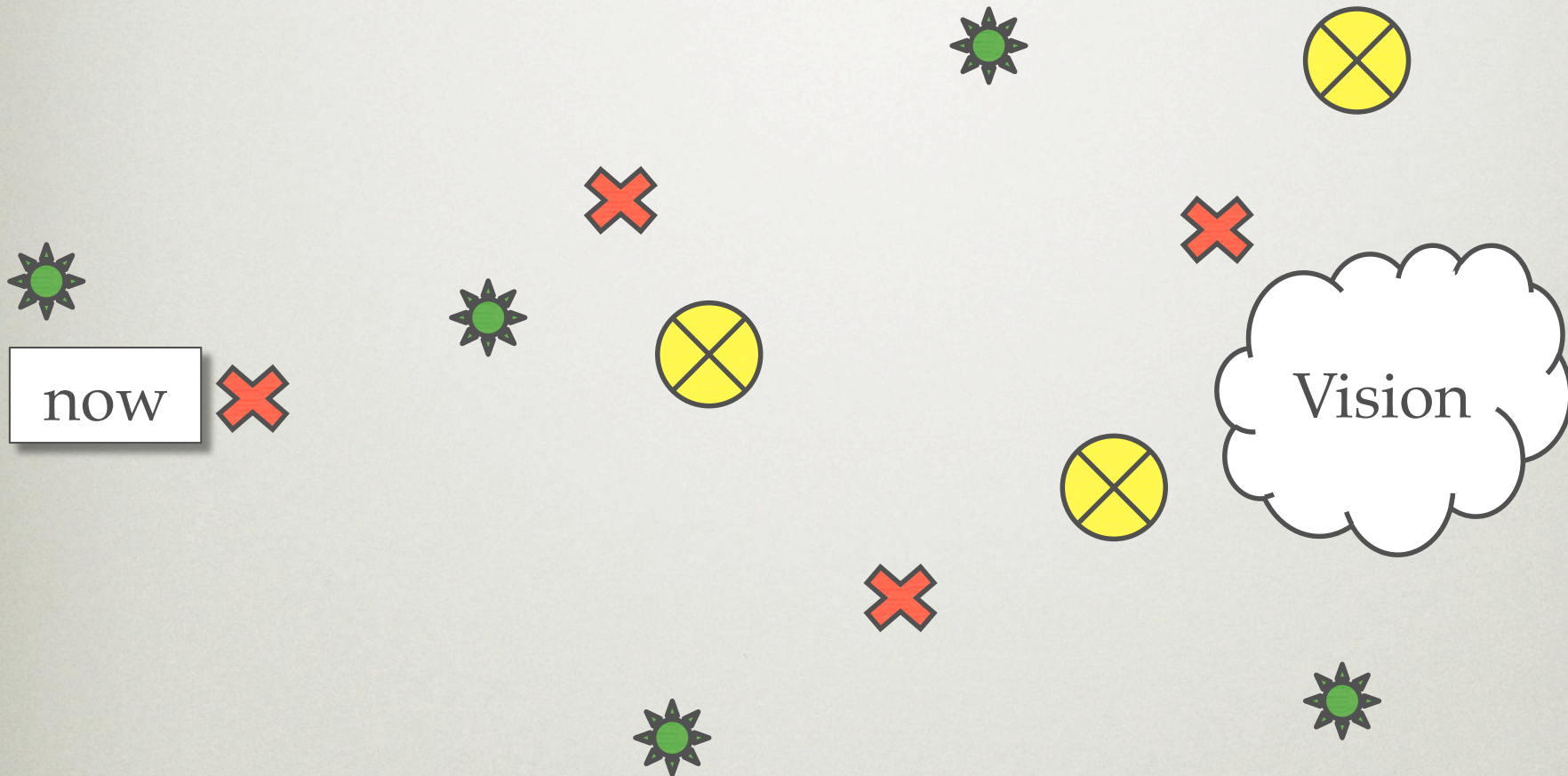


Vision

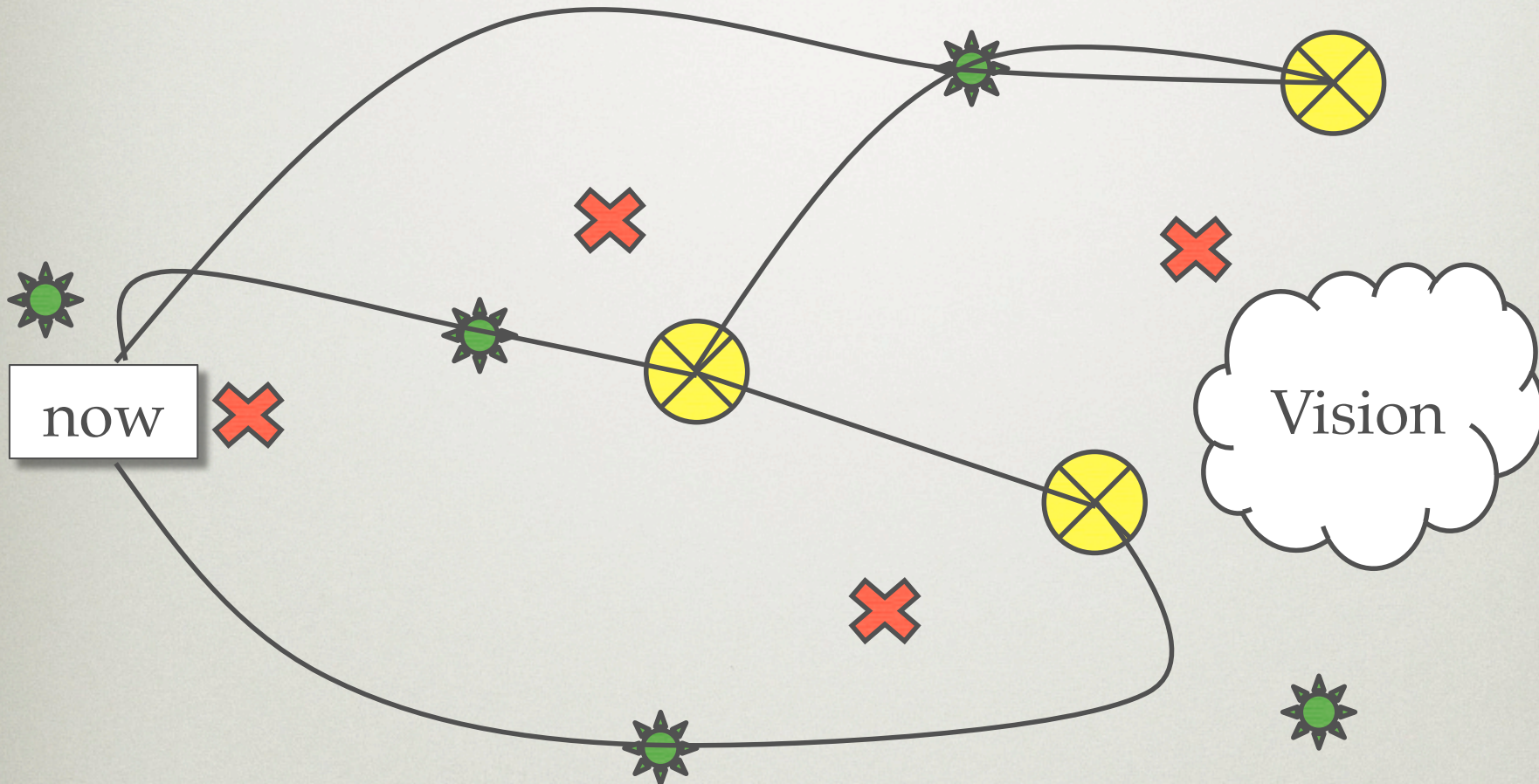
STRATEGIC PLANNING: SITUATION



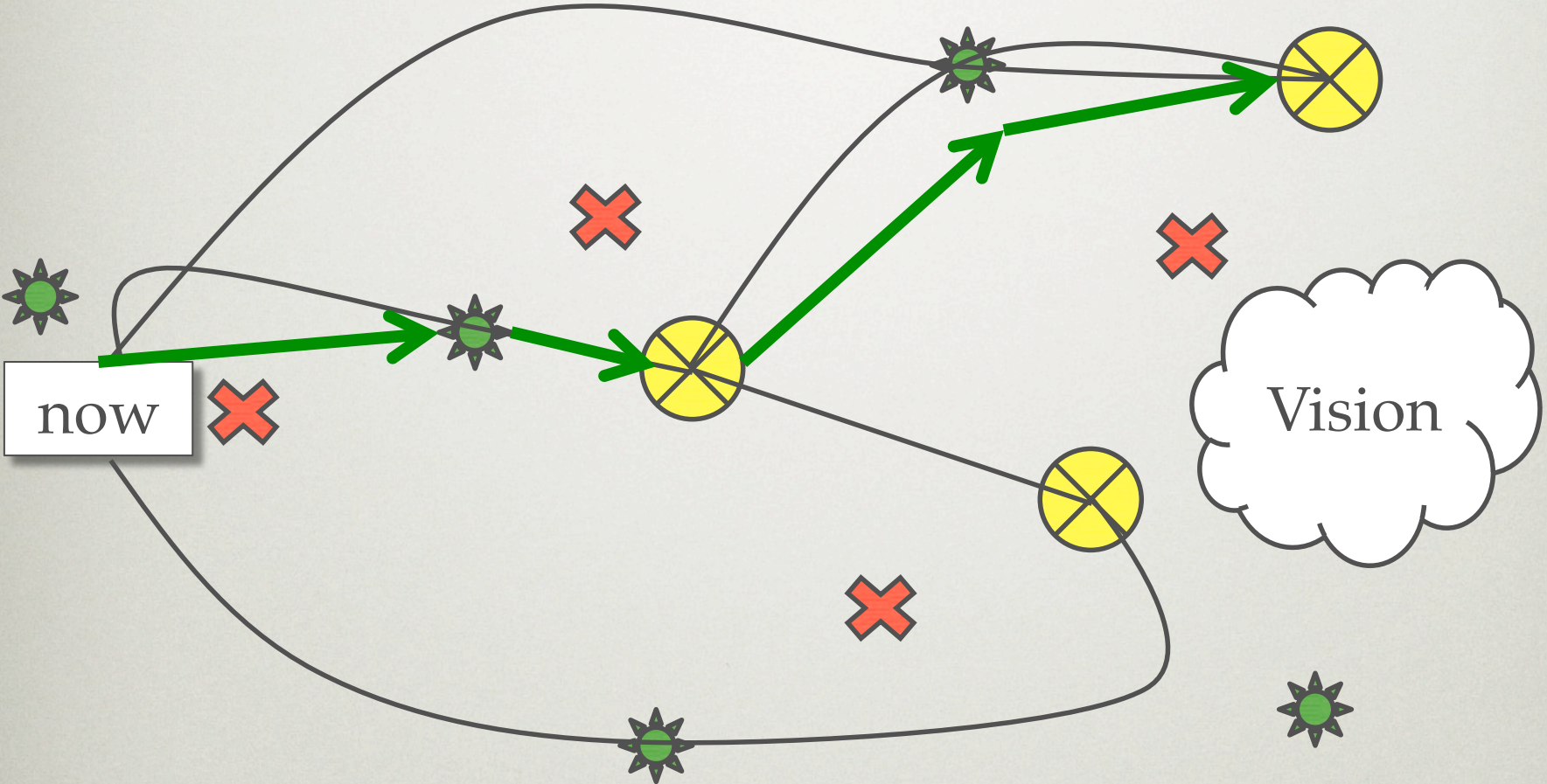
STRATEGIC PLANNING: GOALS



STRATEGIC PLANNING: PATHS



STRATEGIC PLANNING: PROJECTS



VACATION STRATEGY

- Vision: vacation in a warm, sunny place
- Situation: The weather sucks and I feel bad, but I have the money to pay for transportation to various warm, sunny place
- Target: spend upcoming ski vacation in Egypt
- Path: book flight, hotel

SWOT SITUATION ANALYSIS

positive	Strengths	Opportunities
negative	Weaknesses	Threats
	internal	external

WHAT TO ANALYZE WITH SWOT

- Knowledge
- Competition
- Partners
- Technology
- Funding
- People
- Culture
- Politics
- Organization
- Local
- National
- International

SMART STRATEGIC GOALS

- **S**pecific (well-defined, clear)
- **M**easurable (know if / when goal has been achieved)
- **A**greed (by all stakeholders)
- **R**ealistic (within available resource, time, experience, etc.)
- **T**ime-based (due date, adequate time)

DRAW-SEE-THINK-PLAN

- Draw – the ideal state
- See – what the current state is and how far it is to the ideal state
- Think – about specific actions needed to bridge the current state and the ideal state
- Plan - the resources needed to carry out these actions

TACTICS VS. STRATEGY

- Strategy without tactics is the slowest way to achieving the goal.
- Tactics without strategy is a random walk.
- Systematic determination and scheduling of immediate or short-term activities required to achieve the strategic goals.