CreativeIT:
Synergies Between Creativity and IT

✳ An emphasis on synergies between creativity and information technology, science, engineering, and design research.

✳ IT, Creativity, and Design:

- Information technology, enhancing human creative thinking

- Design, as a reflective process, develops new products/methods/organizations in the context of a perceived need or problem

- Creative IT, where the focus on problem finding is as important as problem solving

✳ The combination of creativity and design thinking in information technology, science, and engineering for transformational research.
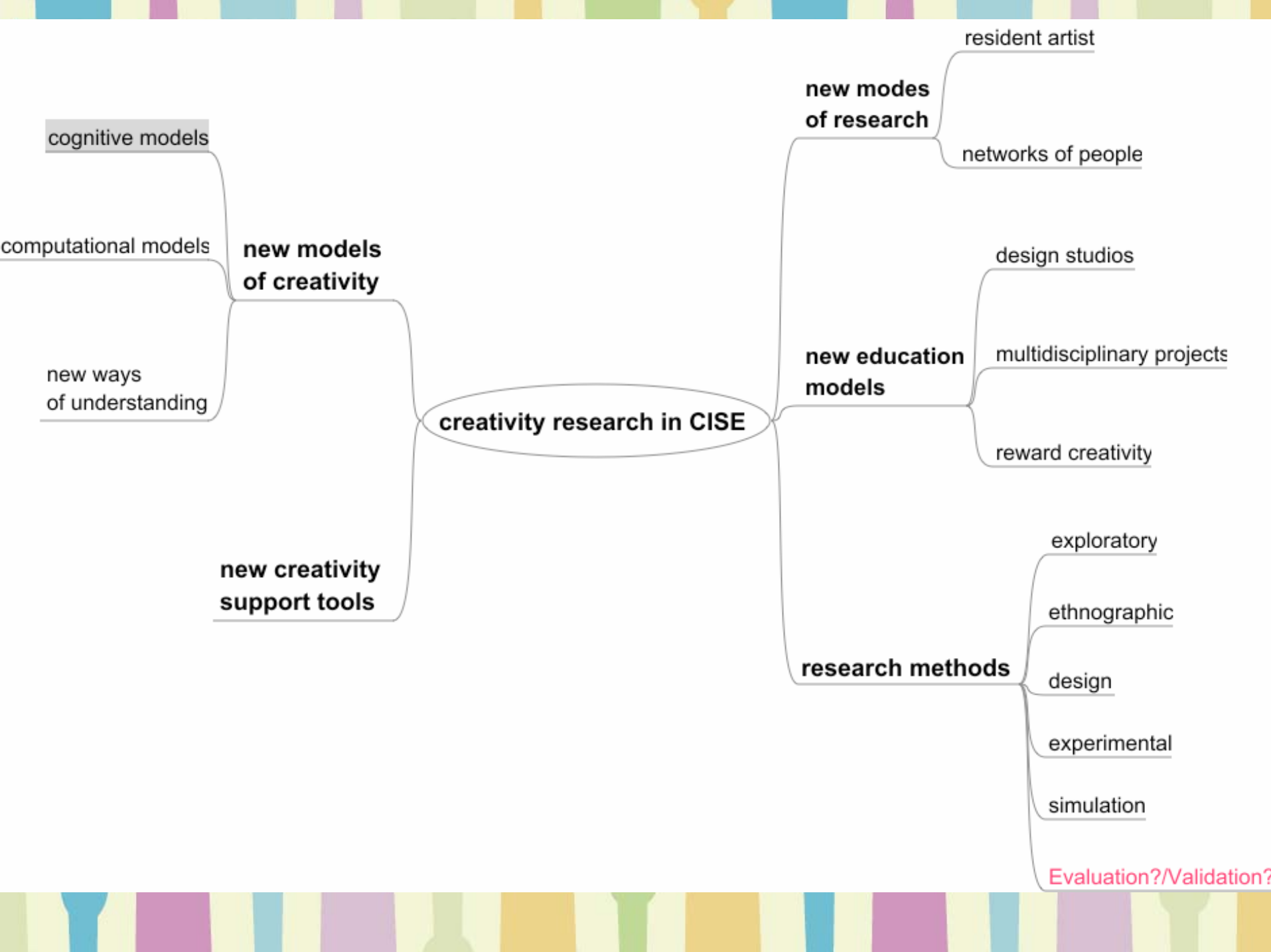
IT Changes/Advances

- Future **internet**: security, speed, all devices

- New **applications**: business, research and social use of internet

- Expanding **market**: global competition in IIS

- Crisis in **education**: information explosion

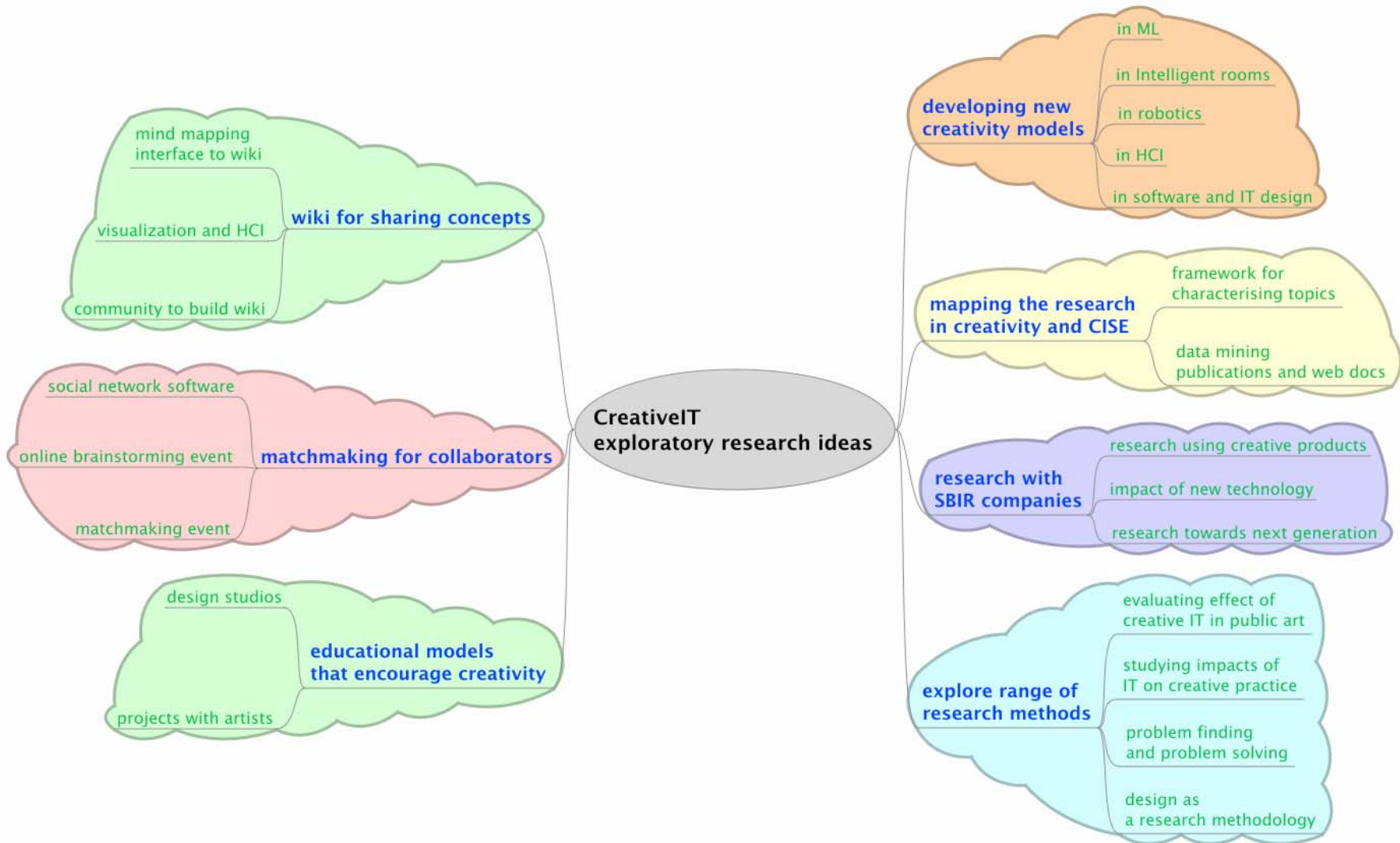- Pervasive **infrastructure**: mobile, distributed computing

Challenges

- Improve/understand creativity and design
- Maintain US competitiveness
- Move towards research led teaching
- Improve interdisciplinary research
- Balance disciplines and collaboration
- Encourage use of new research in practice

Strategies for Responding to Challenges

- Variety of funding schemes:
  - Basic research, individual investigator
  - Research led by industry ideas
  - Research jointly funded with other agencies
  - Networks of multidiscipline researchers
- Community involvement in creative research directions
- Research led teaching, encouraging creativity
- Establish artists and designers in CISE research

creativity research in CISE

new models of creativity
- cognitive models
- computational models
- new ways of understanding

new creativity support tools

new modes of research
- resident artist
- networks of people

new education models
- design studios
- multidisciplinary projects
- reward creativity

research methods
- exploratory
- ethnographic
- design
- experimental
- simulation

Evaluation?/Validation?

CreativeIT exploratory research ideas

wiki for sharing concepts
- mind mapping interface to wiki
- visualization and HCI
- community to build wiki

matchmaking for collaborators
- social network software
- online brainstorming event
- matchmaking event

educational models that encourage creativity
- design studios
- projects with artists

developing new creativity models
- in ML
- in Intelligent rooms
- in robotics
- in HCI
- in software and IT design

mapping the research in creativity and CISE
- framework for characterising topics
- data mining publications and web docs

research with SBIR companies
- research using creative products
- impact of new technology
- research towards next generation

explore range of research methods
- evaluating effect of creative IT in public art
- studying impacts of IT on creative practice
- problem finding and problem solving
- design as a research methodology