This appendix documents the questions each breakout session was charged with addressing.

**JUNE 18 SESSIONS**

**From Research to Commercialization**

- What are the main characteristics of commercially useful research?
- What are the most efficient ways for the academic sector to target firms that might want to partner with them and can provide the needed resources?
- What are the most efficient ways for firms to find academic partners?
- What are the principal challenges or barriers to commercialization?
- What are the best means for eliminating them or reducing their effect?
- What roles can the NSF play in the commercialization process?

**Infrastructure Development for Research and Commercialization**

- What are the principal types of infrastructure needed
To foster the commercialization of research?
To communicate to potential users the goals of research, its relevance to their commercial products and processes?
To disseminate research results to potential users?
To scale up to commercial application (e.g., financial capital, learning curves)?
To fully exploit the value of patents and other IP?

• What roles can the NSF play in fostering the development of needed infrastructure?

Workforce Development and Enhancement

• What are the principal types of infrastructure needed
  — To foster workforce development and enhancement?
  — To educate and train human capital for the research enterprise?
  — To educate and train the workforce?

• How, if at all, does the NSF need to change or improve upon its role in workforce development and enhancement?

Intellectual Property Concerns and Barriers

• What types of benefits (e.g., revenues from licensing and patents, sponsored research, internships for students, funding for equipment) can researchers derive from their IP?

• What are the principal IP issues that need to be successfully resolved by each of the partnerships?
  — From the university perspective
  — From the industry perspective

• What are the main challenges or barriers to their resolution?
• What are the best means for resolving disagreement?
• What if any roles can the NSF play in assisting in resolving IP concerns and barriers?

JUNE 19 SESSIONS

Sustainability
• What are likely to be the key characteristics of sustainable partnerships?
• What means are available for developing these characteristics?
• What are the key challenges or barriers to their emergence and how can they be overcome?
• What if any roles can the NSF play in reducing or eliminating these challenges and barriers?

Metrics/Evaluation/Assessment
• What process measures should be used to evaluate progress before actual outcomes emerge from each partnership?
• What outcome measures should be used to evaluate results at the end of each partnership?
• What other performance measures should be used in assessing the partnerships?

Management and Financial Planning
• What are the key characteristics of a successfully managed partnership?
• What are the main challenges or barriers to successful management and what means are available for overcoming them?
• What are the key elements of a good financial plan?
• What are the main challenges or barriers to financial planning and what means are available for overcoming them?
• What roles can the NSF play that would be both useful and appropriate?