

**Table 4.1**

Kinds of outcomes that would count as “success”

---

<p><b>Effects on the science itself</b></p> <p>New and bigger discoveries are made and are made more quickly</p> <p>New ways of working are demonstrated, and then sustained</p> <p>There is a change in the mix of normal vs. revolutionary science</p> <p>A conceptual revolution is enabled</p> <p>New models of science emerge (e.g., microparticipation)</p> <p>There is more high-quality research</p> <p>Existing collaborations work more easily</p> <p>More and new collaborations are formed</p> <p>Collaborations have a wide geographic and disciplinary spread</p> <p>More jointly authored papers are written and are written more quickly</p> <p>More papers are published and patents are issued</p> <p>Greater willingness to share early ideas</p> <p>Findings are shared more quickly among more people</p> <p>Artifacts that are shared are richer</p> <p>Theoretical discussions are accelerated and enriched</p> <p>Less undesirable duplication</p> <p>Fewer disruptive activities</p> <p>Greater success in competitive arenas</p> <p><b>Science careers</b></p> <p>Greater diversity of scientists</p> <p>Participation reaches beyond U.S. R1 universities</p> <p>Stronger tenure cases because young faculty are known through their collaborations</p>	<p>Improved quality of life and higher satisfaction of researchers</p> <p><b>Learning and science education</b></p> <p>New (diverse) scientists are attracted to the field (capacity building)</p> <p>More students are mentored</p> <p>Extended reach of seminars</p> <p>Material is used in a classroom setting</p> <p>New distance-learning paradigms emerge</p> <p><b>Inspiration to others</b></p> <p>New collaboratories are developed as a result</p> <p>Other software is built inspired by it</p> <p><b>Funding and public perception</b></p> <p>A particular collaboratory is re-funded</p> <p>Public become more interested and literacy increases</p> <p>Public participates more (e.g., microcontributions)</p> <p>Congress becomes more interested</p> <p>New funding initiatives appear for science and collaboratories</p> <p><b>Tool use</b></p> <p>New software is built</p> <p>Builder demos the tools working</p> <p>Users use the software and complain when it is taken away</p> <p>New users try it and continue to use it</p> <p>Tools move from research prototypes to production quality</p> <p>Tools are reused elsewhere</p>
--	--

---