SOCIAL MANUFACTURING:
ALTERNATIVE PATHS TO DEVELOPMENT

We stand at the brink of a transformation in the way we produce the material objects of our lives. Over the coming decade, we will begin to see many industrial manufacturing processes displaced by new forms of molecular-scale manufacturing. Already the tools to create objects from the atom up are being piloted at many scales, from novel single-cell lifeforms to skyscrapers. Small 3D desktop printers are now creating new business models for retailers like Staples. And flexible design tools are making it possible for ordinary people to capture 3D renderings of any object in their environment, creating the potential to reproduce those objects in production runs of one or one million.

But this is not simply a technological revolution. It is also a social and economic transformation in the way we organize to produce what we need as human societies. Our current economic institutions evolved to meet the needs of production at the industrial scale. But as this scale is disrupted at both the bottom and the top, new patterns of organization will emerge to create a new ecology of production and consumption.

Because this ecology is based on an infrastructure of digital information exchange, we can expect it to mimic the patterns we have already seen in social media:

- **Leveraging open systems** to create new value
- **Democratizing the systems of production** to engage more diverse actors
- **Stimulating innovation** by “mashing up” processes and products
- **Blurring the lines** between production and consumption
- **Creating new patterns** of funding and remuneration
- **Creating new kinds of crowd phenomena** — think flash maker mobs

In short, we are about to enter an era of social manufacturing that will remake the landscape of production and consumption worldwide.

While much of this experimentation is happening in traditional hot beds of innovation in the United States (Silicon Valley, MIT, NYC), the relatively low investment costs make it possible for new communities of social manufacturing to take root in places like Shenzhen, Cairo, Nairobi, and Baghdad. These diverse zones are prototyping new socio-technical systems for creating wealth and material well-being that will shape the coming century.

**A KEY QUESTION: HOW WILL THESE EMERGING PATTERNS OF SOCIAL MANUFACTURING TRANSFORM THE PATHS TO DEVELOPMENT AROUND THE WORLD?**

Institute for the Future has been tracking these new early-stage economies to understand the drivers of innovation, the tools that enable it, and the transformations in the socio-economic relationships that will define the future of social manufacturing. We propose to anticipate the potential of the new tools and practices through a series of scenarios for alternative paths to development in a world of social manufacturing.
THE SOCIAL MANUFACTURING INITIATIVE

IFTF is launching an initiative to provide in-depth insight into the future of social manufacturing and its impact on development around the world.

THE RESEARCH PLAN I

IFTF proposes to create a map of alternative paths to development in a world of social manufacturing. We will combine ethnographic interviews and foresight workshops in maker communities around the world with an alternative futures scenario framework to identify four alternative paths to development. In each of these scenarios, social manufacturing will be at the core of the story, but the stories will diverge as the assumptions vary from growth to constraint, collapse, and transformation. Each scenario will explore the paths for communities in countries at different levels of development in today’s economy.

The deliverables will be a graphic map for exploring the ecosystem of social manufacturing under each of the scenarios, as well as a set of four narrative scenarios that bring the experiences of development to life.

THE RESEARCH PLAN II

An alternate plan is to convene a gathering of experts in fabbing, social production, and development, together with makers from diverse communities around the world to engage in a day-long visioning process to create alternative scenarios for development in a world of open fabbing tools and social manufacturing practices. This workshop would provide input to the design of a crowd-based forecasting game to anticipate future paths to development, engaging makers around the world in envisioning how their activities could spur development in their communities. The IFTF team would then analyze the results to create narrative scenarios that capture the most compelling visions of development from the game.

The deliverables in this case would be a graphic recording of the expert workshop; a set of game scenarios in video format; and a set of narrative scenarios for alternative paths to development.

QUESTIONS?

If you have any questions about this initiative, please contact Lyn Jeffery at ljeffery@iftf.

ABOUT THE INSTITUTE FOR THE FUTURE

The Institute for the Future is an independent, nonprofit strategic research group with 45 years of forecasting experience. The core of our work is identifying emerging trends and discontinuities that will transform global society and the global marketplace. We provide our members with insights into business strategy, design process, innovation, and social dilemmas. Our research generates the foresight needed to create insights that lead to action and spans a broad territory of deeply transformative trends, from health and health care to technology, the workplace, and human identity. The Institute for the Future is based in Palo Alto, California.