



## Long-run Prospects: Policy Challenges for a World in Transition

**What are the major opportunities and risks of 21st century transitions?**

**Will technology be enough?**

**Is a long-boom plausible, is it probable?**

**Can there be creativity without differences?**

**Can there be positive transitions without changes in governance?**

**How might governments encourage desirable 21st century transitions?**

**Conclusion**

**For further information?**

**For further reading**

**Where to contact us**

### Introduction

Assessments of the implications of the recent bursting of the dot-com bubble on world stock markets need to take into account not only the short-run disappointment of investors and laid-off workers, but also the hopes that the Internet is part of a broader, longer-term process of socio-economic change with tremendous positive potential. In fact, many people are asking if the world is indeed entering a period of major socio-economic transformation – a period when from one generation to the next there is the possibility of radical change in where and how they live, what and how they produce and consume, and even in their culture and values.

Simply put the question is: will daily life by the third decade of the 21st century seem radically different for large parts of the world's population when compared with the last decades of the 20th century? On most counts, the answer to this question is yes. According to the findings of the OECD International Futures Programme (IFP) conference series on 21st Century Transitions the seeds of change are in place. However, turning these seeds into the socio-economic reality of the 21st century poses a dual challenge.

First, creating the conditions that nurture far reaching transformation will require a wide range of distinct yet inter-dependent changes. Second, as the IFP's analysis underscores, a concerted effort will be needed to bring the unfolding reality of 21st Century Transitions into line with people's ideas of what is desirable. Clearly, policy is what will make the difference, both for creating the conditions conducive to 21st Century Transitions and to ensuring that opportunities are grasped while risks are effectively managed.

The findings of the conference series point towards four sets of general causal forces that could drive transitions world-wide: continued diffusion of technological breakthroughs; deeper economic interdependence and more intensive competition, from the local through global levels; greater diversity of social status and identity, both within and between the socio-economic boundaries bequeathed from the 20th century; and ongoing dispersion of power and responsibility leading to less hierarchical and less rigid methods for making and implementing decisions in all spheres of human activity. ■

## What are the major opportunities and risks of 21st century transitions?

Change on a transitional scale presents many opportunities to realise some of humanity's most important goals, from extending the practical application of basic human rights to improving sustainability in its broadest social and ecological terms. Widespread transition is also likely to provoke changes in the nature, degree and perceptions of a wide variety of opportunities and risks, such as new tools that might be used for either good or ill and social tensions that could either be overcome or exacerbated. ■

## Will technology be enough?

*Opportunities* – 21st Century Transitions have the potential to usher in pervasive technological advances on a par with those of previous periods like the steam engine, electricity and the automobile. Information technology could advance to the point where the result is seamless, global knowledge-sharing, be it about buyers, sellers, communities of interest, or culture. Some confidently expect computers using a range of sensory input and output devices, all-pervasive network connectivity, massive databases, and so-called “intelligent agent” software, to be deployed in ways that transform when, where and how people work, play and live.

Biotechnology could provide powerful new tools both for fighting dis-

eases in all parts of the world and for reducing the ecological footprint of many industries, including agriculture and food processing. Developing technologies open up the possibility of new materials, production processes and product designs that could transform sectors like construction, consumer durables, and energy generation, bringing potentially dramatic improvements in the efficiency as well as the usefulness of many types of products – from smart buildings and vehicles to intelligent clothing and household utensils.

*Risks* – Leaps in the capacity and diffusion of new technologies always come with the risks of transition difficulties, misuse, and harmful unintended consequences. Some worry about the capacity, both technologically and socially, to continue advancing and inventing new tools, products, and organisational forms for everyday work and home life. Others worry that the on-going transition costs may be too high, or that the risks to cherished traditions (including privacy) or the threats to environmental sustainability will – singly or together – be too great to bear.

Two widely recognised dangers stand out. First, people are afraid of losing control of tomorrow's “intelligent” machines and genetically engineered life forms. Second, there are fears that radically new tools and products will exacerbate the schisms between haves and have-nots, risk-takers and risk-avoiders. Another, more societal concern, is that the benefits of technological advances will fail to materialise because the economic and social changes that shape and diffuse positive technical developments do not occur.

*Technological dynamism* – Discovery is often cited as one of the most important forces driving the development and diffusion of technology. However, the findings from the first conference, while underscoring the tremendous potential of the still untapped uses of the current crop of technological breakthroughs, put a much stronger emphasis on the role of economic and social changes in creating the conditions conducive to rapid advances and wide distribution of new technologies. ■

## Is a long-boom plausible, is it probable?

*Opportunities* – A confluence of technological, economic and social changes could spark a new long-boom – a sustained period of wealth creating restructuring – to power 21st Century Transitions worldwide. Three broad developments open up tremendous potential for advancing overall well-being. First, the shift to a knowledge-intensive economy could spark the changes in investment, employment and productivity needed to transform the organisation and methods of production and consumption. A key dimension of this shift, primarily for advanced OECD countries, is the prospect that the distinction between supply and demand sides of the economy will begin to blur as consumers enter much more directly and actively into the initial part of the production process, before output is actually created.

Second, much deeper global integration could induce a virtuous circle

of investment and growth as knowledge, capital, and trade flow freely. Here the evolution of planet-wide networks plays a crucial part in helping people co-operate and compete, experiment and learn. Third, and perhaps most challenging, a transformation in humanity's relationship to the environment could give rise to an investment boom in more ecological products and ways of living as well as more efficient energy and transportation infrastructures. Such an environmental agenda could dovetail quite effectively with the macro- and micro-level changes involved in moving towards a globally integrated knowledge economy and society.

*Risks* – Long-booms depend on a constellation of factors coming together. If one or two of the pieces, like deeper global integration or progress in controlling ecological costs, cannot be achieved, then instead of the dynamic transformation of a long-boom there could be an extended period of stagnation or decline. Without the excitement and incentives promised by synergistic change, there is a high risk that the economic restructuring upon which 21st Century Transitions depend will not take place. This, in turn, heightens the risk of inadequate resources for addressing socio-economic needs or for finding “win-win” solutions that avoid destructive conflicts.

Constraints such as limited access to easy-to-use “appropriate technology” and out-dated methods for creating, assessing and valorising human capital threaten to slow change or render it too shallow. If advances towards the intangible economy's radically new organisational patterns of production, con-

sumption and human settlement remain modest, there will be less evidence of the benefits that play a crucial role in inspiring people to overcome their fear of both unfamiliar technology and the prospect of disruption to existing economic and social structures. Similarly, the rapid and much fuller integration of markets required for a long boom are unlikely to be politically feasible without mechanisms for compensating losers and guaranteeing the minimum standards for building trust.

*Economic dynamism* – After assessing the factors that could lead to an extended period of above average economic opportunity world wide, the general view from the second conference in the series was that such a trajectory was plausible if not highly probable. The formidable challenge will be to create the high degrees of synergy across a vast range of changes and do so in ways that not only make transformation likely but also desirable for most people. ■

## Can there be creativity without differences?

*Opportunities* – Growing diversity in the social fabric could well be one of the hallmarks of 21st Century Transitions. This trend is likely to be pushed along by changes in demographic structure, shifting income distributions, migration, and the erosion of traditional cultural reference points. Certain trends can already be identified as evidence of such social change, where heterogeneity of social structures match

diversity in the economic, technological and educational spheres.

Around the world, starting from very different points of departure, 21st Century Transitions can be expected to induce major alterations in two of the key determinants of self-identity: social status (income, age, profession, etc.) and authority structures (nation, family, religion, etc.). Greater differentiation might in turn open up opportunities for diversity to fuel the creativity needed to make the most of new technologies, economic change, and social transformation.

*Risks* – A number of major risks arise in the context of increasing social diversity. There comes a point at which positive difference and diversity becomes negative inequality and segregation. There are thus risks of unacceptable inequality, especially in the distribution of income, wealth, education and health. Similar concerns arise about too many individuals having access to only very low absolute levels of resources, as well as issues to do with personal security and human rights.

Three specific risks can be singled out. One is that changes on the scale provoked by 21st Century Transitions are highly likely to exacerbate old, while provoking new, social conflicts. A second is that people and institutions will not acquire the capacities needed to turn greater diversity into a source of creative solutions to tomorrow's challenges. Third, there is a risk that the backlashes sparked by greater diversity will triumph, imposing the uniformity espoused by, for instance, intolerant forms of nationalism or religious fundamentalism.

*Social dynamism* – Major changes in the attributes and patterns of social status and identity are both symptoms and causes of transitions. For 21st Century Transitions the transformative impact of greater differentiation is closely linked to its synergistic potential when combined with the “empowering” possibilities of tomorrow’s technological and economic changes. Here, as emphasised in the third conference in the series, without policies that leverage diversity as a wellspring for creativity and inventiveness, there seems little chance of reaping the benefits of 21st Century Transitions. ■

## Can there be positive transitions without changes in governance?

*Opportunities* – Old forms of governance, in both the public and private sectors, are becoming increasingly ineffective. 21st Century Transitions are likely to involve new forms of governance that break decisively with two of the primary attributes of today’s governance systems. These are the fixed, often permanent allocations of power embedded in the structures and constitutions of many organisations, and the tendency to vest initiative primarily in the hands of those in hierarchically senior positions.

What is particular to 21st Century Transitions is the extent to which the three broad sets of forces propelling changes – the development and diffusion of new technologies; the emergence of new, more efficient and transparent forms of economic

organisation; and the leveraging of social diversity for creativity – simultaneously depend on and facilitate less hierarchical and less fixed methods of governance. These changes will call for major advances in the practical skills and rules used in daily life by organisations and individuals, whether operating alone or in concert, locally or globally. Here there is an opportunity, using the knowledge and motivation that come with enhanced freedom and responsibility, to make significant strides in the extent to which individuals and communities control their future.

*Risks* – The governance risks facing 21st Century Transitions come in two main forms. First, institutional inertia and resistance by entrenched interests could generate considerable conflict and potentially stifle efforts to transform old methods and invent new ones. Transition periods often give rise to deep-seated differences in the perception of risk and insecurity. On the one hand, those who are not actively creating the new rules and power structures tend to perceive major changes as driven by external and dangerous forces. On the other hand, winners try to sweep all opposition and reluctance away, claiming progress as their mantle.

A second set of governance risks centre on the difficulty of raising the capacities of individuals and households, enterprises and legislative bodies, to make and implement decisions. Past habits and institutional practices are likely to be inadequate for navigating the strong currents and uncharted waters of 21st Century Transitions. Reducing the risk of damaging mistakes, missed opportunities and failures to

learn will call for social and institutional infrastructures capable of supporting governance systems that put much more knowledge to work for finding creative solutions to conflicts and pursuing high levels of dynamism.

*Dynamic Governance* – 21st Century Transitions will be accompanied by the decay, resistance and adaptation of existing forms and methods of governance, along with the emergence of entirely new loci and means for making and implementing decisions. The challenge for policy, as discussed in the fourth and final conference in the series, will be to ensure that people will have sufficient learning capacities – rooted in cultures and values that effectively combine tolerance, competition and co-operation. ■

## How might governments encourage desirable 21st century transitions?

Plausibility is not the same as inevitability nor is it desirability. Nurturing the seeds of 21st Century Transitions, reaping the benefits, and minimising the risks will call for strong policy leadership by governments at all levels world wide. A strategic path for facilitating Transitions needs to take advantage of the interdependence and potential for synergy across technological, economic, social, and governance changes. The types of policies, particularly pertinent for advanced OECD countries, can be grouped into one of three categories: first, those policies that

involve a continuation of existing approaches, second, policies where significant reform is needed, and third, innovative initiatives that break entirely new ground.

*Continuity* – There are a number of key policy areas where continuity with existing approaches will be important. Sound macro-economic management that guards against inflation and excessive public deficits will be needed to provide a generally stable and predictable macro-economic climate that is conducive to Transitions' high levels of investment, innovation, entrepreneurship and risk taking. Encouraging the kind of fluid structural adjustment that Transitions require will also call for a continuation of current efforts to improve the functioning of product, labour and capital markets. Similarly, ongoing refinements to the quality and scope of government regulation, taxation and spending will be essential.

As is now the case, international guidelines and frameworks will be the subject of continuing scrutiny and action, dealing with such issues as corruption, corporate governance, consumer protection, financial transparency, and the monitoring of global threats to health and security. Existing agreements that foster world-wide integration will need to be implemented and extended. These include multi-lateral treaties on trade and investment as well as other cornerstones of globalisation such as the 1948 Universal Declaration of Human Rights and the more recent initiatives similar to the Kyoto Protocol on greenhouse gases.

*Reform* – In other policy areas the requirements of Transitions will call for considerable re-thinking of the

methods and programmes currently in place, such as in social and educational services. In most OECD countries established government programmes were designed for the industrial era when the majority of people experienced similar life-patterns – starting with initial schooling, then steady employment, and lastly retirement at the same fixed age. 21st Century Transitions will tear these patterns asunder calling for new approaches. For instance, lifelong learning will need to embrace a much wider range of sources for acquiring knowledge and incentive systems for encouraging people to learn on a continuous basis. Social support systems will need to encourage risk-taking and experimentation without creating dependency and dead-ends. In general, there will need to be a shift away from the direct provision of mass, uniform public sector services to much more diversified, decentralised and demand-driven approaches.

21st Century Transitions will also require policy reform at the global level. Efforts to overhaul the rules that apply to international financial transactions and reporting will need to continue. In addition, more ambitious agendas will likely be necessary in such fields as intellectual property rights, foreign direct investment, transparency of tax regimes and treatment of anti-competitive practices. Debates around international trade, global health issues and labour standards cannot be left to languish either, since 21st Century Transitions depend on dynamism in all of these areas.

*Innovations* – The radical changes wrought by 21st Century Transi-

tions will demand a wide range of policy breakthroughs. For example, policy leaps will be needed to address the tensions arising from the Transition induced asymmetry between, on the one hand, the relatively rapid spread of global markets and, on the other, the slow development in essential legal, institutional and cultural infrastructure. In addition, 21st Century Transitions are likely to put a premium on new ways of doing things that stress personal accountability, internal motivation, and uniqueness. Such a path will demand policy breakthroughs in the rules and institutions capable of: ensuring privacy, granting ownership to intangible property, extending open knowledge sharing, reaping network externalities, and setting a wide range of new technical, economic and social standards.

Intolerance of policy differences and demands for uniform approaches cannot be expected to create the foundations for communication and trust upon which positive 21st Century Transitions depend. The aims and methods of policy makers must be to foster compatibility and cultivate legitimacy. Respecting differences as well as learning from both the successes and failures of rapid experimentation will need to be the watch-words of public policy formation at local, national and global levels. Such approaches to decision making should help to spark the kinds of difficult to anticipate breakthroughs needed to really tackle challenges such as climate change, managing the Internet, and finding ways for the winners from change to compensate the losers – not only at a national level but critically at a global level. ■

## Conclusion

Pursuing this strategic path implies an important convergence of government policy goals towards the encouragement of liberty, diversity, and responsibility – a broadly conceived agenda for 21st Century Transitions. Convergence of the general policy goals will also be needed if the public sphere is to attain the

requisite degrees of transparency, accountability and integrity. The specific policy frameworks and particular methods of implementation, however, will certainly vary widely throughout the world. The starting points for change are highly diverse and, crucially, aspirations differ. Over the long-run, the chance to turn the plausible into the desirable is perhaps the biggest challenge and moral obliga-

tion posed by the prospect of 21st Century Transitions. ■

## For further information?

More information about the report can be obtained from Riel Miller (email: [riel.miller@oecd.org](mailto:riel.miller@oecd.org)) ■

For further reading

- *Governance in the 21st Century*, 2001.  
ISBN: 92-64-18541-0, €: 23.00, FF: 150.87, 212p.
- *The Creative Society of the 21st Century*, 2001.  
ISBN: 92-64-17196-7, €: 23.00, FF: 150.87, 200p.
- *The Future of the Global Economy: Towards a Long-Boom?*, 2001.  
ISBN: 92-64-17029-4, €: 23.00, FF: 150.87, 200p.
- *21st Century Technologies: Promises and Perils of a Dynamic Future*, 2001.  
ISBN: 92-64-16052-3, €: 23.00, FF: 150.87, 176p.



OECD publications can be securely purchased  
from the OECD Online Bookshop

[www.oecd.org/bookshop](http://www.oecd.org/bookshop)

The OECD Policy Briefs are prepared by the Public Affairs Division,  
Public Affairs and Communications Directorate.  
They are published under the responsibility of the Secretary-General.

Where to contact us?

**FRANCE**

OECD Headquarters  
2, rue André-Pascal  
75775 PARIS Cedex 16  
Tel.: 33 (0) 1 45 24 81 81  
Fax: 33 (0) 1 45 24 19 50  
E-mail: [sales@oecd.org](mailto:sales@oecd.org)  
Internet: [www.oecd.org](http://www.oecd.org)

**GERMANY**

OECD BERLIN Centre  
Albrechtstrasse 9/10  
D-10117 BERLIN  
Tel.: (49-30) 2888353  
Fax: (49-30) 28883545  
E-mail:  
[berlin.contact@oecd.org](mailto:berlin.contact@oecd.org)  
Internet: [www.oecd.org/deutschland](http://www.oecd.org/deutschland)

**JAPAN**

OECD TOKYO Centre  
Landic Akasaka Bldg  
2-3-4 Akasaka, Minato-Ku  
TOKYO 107  
Tel.: (81-3) 3586 2016  
Fax: (81-3) 3584 7929  
E-mail: [center@oecdtokyo.org](mailto:center@oecdtokyo.org)  
Internet: [www.oecdtokyo.org](http://www.oecdtokyo.org)

**MEXICO**

OECD MEXICO Centre  
Av. Presidente Mazaryk 526  
Colonia: Polanco  
C.P. 11560  
Mexico, D.F.  
Tel.: (00.52.5) 281 3810  
Fax: (00.52.5) 280 0480  
E-mail:  
[mexico.contact@oecd.org](mailto:mexico.contact@oecd.org)  
Internet: [www.rtn.net.mx/ocde](http://www.rtn.net.mx/ocde)

**UNITED STATES**

OECD WASHINGTON Center  
2001 L Street N.W.,  
Suite 650  
WASHINGTON D.C. 20036-4922  
Tel.: (1-202) 785 6323  
Fax: (1-202) 785 0350  
E-mail:  
[washington.contact@oecd.org](mailto:washington.contact@oecd.org)  
Internet: [www.oecdwash.org](http://www.oecdwash.org)  
Toll free: (1-800) 456 6323

The OECD Policy Briefs are available on the OECD's Internet site

[www.oecd.org/publications/Pol\\_brief/](http://www.oecd.org/publications/Pol_brief/)

