

THE FUTURE is a high-resolution game

2010 MAP OF THE DECADE

THE GOALS ARE CLEAR

HAPPINESS

What do we really want out of life?

RESILIENCE

What if we could all respond better, adapt more quickly, find steadiness amidst perturbation?

LEGACY

How can we craft a world worth leaving to the next generation—to the next hundred years of play?

THE RULES?

These are less obvious. Do we follow the rules of the past century: compete to grow? Or do we create new rules for a new era: seek well-being within a world of constraint, or cooperate to create a new and as yet unimagined civilization? And what happens if things go wrong, if we find ourselves face-to-face with collapse? This is a game where we, the players, choose the rules. That's the first move, and it commits us to our path.

THE GAMESCAPE ITSELF IS A HIGH-RESOLUTION GRID

Never before has humanity been able to encounter the future in such detail, to measure the forces of change at such vast scales and to fill in the details with such fine grain. Unfortunately, the grid is not complete. Some cells resolve to the scale of nano-images. Others remain blurry or even blank. We play by filling in the details of the grid, by increasing the resolution at every unmapped edge.

WHAT GIVES THE GRID ITS STRUCTURE?

There are five big forces that we must confront in order to win: **carbon, water, power, cities, and identity.**

These lay the tracks for the worlds we will build together over the next decade, for our ten-year adventure in future-crafting. For each force, we can take four alternative paths, explore four alternative scenarios: **growth, constraint, collapse, and transformation.**

As we play this game, reality becomes increasingly localized. We find ourselves in ever more layered and nuanced futures that often look distinctly different across geographies, across cultures, and even across the various identities each of us claims. More than a fragmented marketplace or a contentious body politic, this future looks like a massively branching game environment, where you can win without ever discovering half of the possible pathways—but you can also lose by mistaking a clear line of sight for the whole story.

In a decade of challenge, this map is a guide. Play with heart and take the game seriously. Stake out your reality. Choose your quests. Hone your world-building skills. Then let the gameplay begin. ▼



INSTITUTE FOR THE FUTURE

124 University Avenue, 2nd Floor Palo Alto,
CA 94301 650.854.6322 www.iff.org

HOW TO USE THIS MAP ► HOW TO PLAY THE GAME

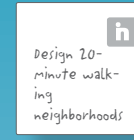
Think of the coming decade as a high-resolution game. This map is your guide to the gameplay.



Each cell in the grid is a scenario where you could win or lose. It's also a starting place for strategy—a place to play a winning card.



Within the grid, you'll find clues—signals about the future that are happening today.



Three types of cards suggest strategies for world-building. Happiness. Resilience. Legacy. These are goals worthy of a world-changing decade.

Here are some suggestions for how to play your cards to achieve these goals:

HAPPINESS



Happiness looks different in each of the scenarios—and presents different challenges.

Pick a row, and start by asking the right question for that scenario:

GROWTH:

In a world where happiness is a measure of life satisfaction, how can you help people achieve their life goals?

CONSTRAINT:

In a world where happiness is a moment of well-being, how can you help people enjoy more of those moments?

COLLAPSE:

In a world where happiness is a biochemical state, how can you help people manage their personal biochemistry?

TRANSFORMATION:

In a world where happiness is a social contagion, how can you help engineer happiness on an extreme scale?

As you move across the map, you'll encounter different challenges in each of the forecast scenarios. Turn them into quests. What's required to amplify happiness in this scenario? What will you undertake? What could your organization undertake? What kind of network do you need to succeed?

RESILIENCE



Each forecast on the map—each column—poses its own challenges to resilience.

The TYF Superstruct Strategies from 2008 provide an innovative resilience toolkit that leverages the emerging world of hyper-connected networks.



To play these networks, start by choosing a forecast. Then work your way down the column, looking for the challenges that matter most to you. Think about a way to apply one of these Superstruct Strategies:

EVOLVABILITY: How can you encourage rapid innovation?

EXTREME SCALE: How can you work the spectrum of scale from micro to massive?

AMBIENT COLLABORATION: How can you design environments for positive feedback?

REVERSE SCARCITY: How can you use renewable and diverse resources as rewards?

AMPLIFIED OPTIMISM: How can you find and link super-empowered hopeful individuals?

ADAPTIVE EMOTIONS: How can you use awe, wonder, and appreciation to build strategic advantage?

PLAYTESTS: How can you turn challenges into fun experiments?

LEGACY



In many ways, legacy is all about the epic win. It's the play that will change you or your organization or your

community today—and make a difference for your grandchildren and their grandchildren for decades to come. To play for an epic win, scan the entire map, looking for the biggest challenges: challenges that reach beyond the boundaries of your own daily world. Then use two guiding questions to play a card:

What will my great-grandchildren say?

Pick a cell in the map and think ahead three generations. Imagine how your great-grandchildren will talk about the history of that cell in 2060. Write down their words, such as: *Back in 2010, my great-grandparents made it possible for our generation to ... (fill in the blank).*

What can I do to make that statement true?

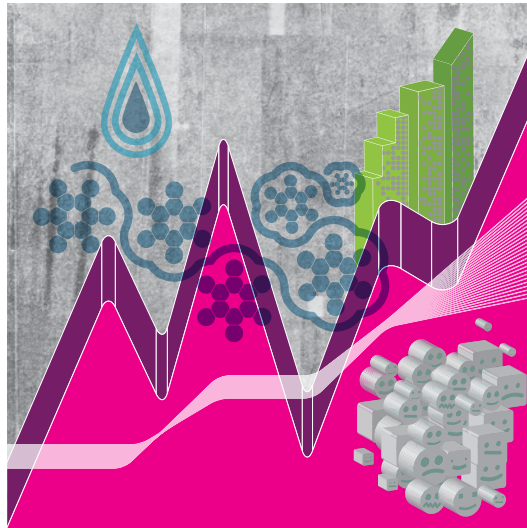
On another card, write down something that you or your organization or community could do today to make it real. Make it as concrete as possible. Use both the happiness and resilience questions to help you think of a play that could really be an epic win.



4 Alternative Paths to the Future ...

The Scenario Growth paradigms continue to drive this world, and modest, erratic economic growth continues. But this growth is driven primarily by heavy investment to avert looming disasters, with massively funded technological innovation to meet climate, food, and other environmental crises.

- Shorter, more localized boom and bust cycles
- New kinds of credit for new kinds of investors
- Increasing global consumption
- Growing rich-poor gap, with locally diverse shifts along the spectrum of the middle class
- Ad hoc application of deep new knowledge



What you'll encounter in a future of growth



carbon

Electric transport vs. biofuels, natural gas vs. closed-box nuclear—competing solutions drive market volatility, policy stalemates, and continued growth of carbon emissions



water

Water is the new oil—desalination technologies provide a competitive advantage as Gross Water Production (GWP) becomes a measure of economic vitality



power

China First, India First, US exceptionalism—nationalist sentiment provides the backdrop for debates about geoengineering and climate mitigation vs. adaptation



cities

Sensor-driven smart cities—urban data becomes a strong economic driver and a platform for business opportunities



identity

Autonomous networked identities—digital trace analysis takes identity tracking and identity management to a new level while neuro-enhancement tools grow in popularity

The Scenario A sustainability paradigm sets the norms for consumption and shifts both local and global priorities away from productivity and wealth generation toward creative participation and happiness. Strong policy, quotas, and game-like missions drive social cohesiveness.

- Weak economic indicators
- High jobless rates and new definitions of work
- Local alternative currencies
- Games as policy forums
- Widespread monitoring and modeling of social and environmental indicators



What you'll encounter in a future of constraint



carbon

Good carbon citizenship, regional carbon trading—but not enough to stave off localized climate destruction



water

Personal and national water footprints—global water stress drives new demands for water efficiency across all sectors, especially agriculture



power

Global environmental goods and services metrics—science-based management becomes the primary tool of governance



cities

Lifestyle innovations focus on reducing footprints—and increase integration of local communities

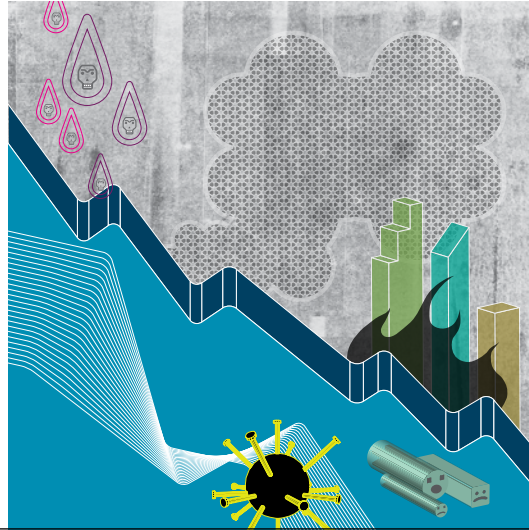


identity

Self-monitoring—digital footprints for everything from carbon, water, and food to health and happiness define personal identities and drive personal behaviors

The Scenario Multiple serial or cascading local and regional collapses continually threaten the stability of the world, depleting resources for meaningful innovation, personal and ecological health, and social remediation. Migration is a flashpoint for local and regional conflict.

- Widespread economic dislocation
- Bankruptcies across traditional public and private institutions
- Severe food shortages, growth of diet-related illness
- Crisis of materials: resource lock down
- High monitoring, low transparency



What you'll encounter in a future of collapse



High carbon emissions, low carbon-free capacity—lost opportunities to generate wealth from carbon management undermine the Global South



Floods and water famines—river basins become the focus of growing conflict, including armed conflict



Worldwide loan defaults—cascading economic, environmental, and political collapse create a crisis in global leadership that signals the end of the globalization era



Growth of slums, deterioration of suburbs—but urban farming comes to the rescue



Neuro-fingerprinting—new ways to track what goes on in our brains are used both to protect personal identities and to incriminate those who stray

The Scenario A fundamental change in the costs of coordination across a variety of human activities begins to create organizational innovations that significantly disrupt traditional institutions and processes, with a focus on rapid adaptation to extreme environments. Rapid innovation in parallel institutions goes hand-in-hand with technological innovation.

- Economy as game: open money gaming platforms
- Open work networks and unbundled tasks
- On-demand services, on-location providers
- Small-scale manufacturing and open fabbing
- Bio-based engineering paradigms



What you'll encounter in a future of transformation



Lightweight innovation in very small-scale energy technologies—leveraged at extreme scales



Oceans as the next frontier—exploration and even colonization of the marine world drives new underwater technologies and new debates about who owns the information they produce



Dense networks, citizen engagement—experiments in governance proliferate as long-standing institutions prove too slow and self-interested to meet new challenges



Biomimetic ideals drive radical new architectures, materials, and communities—with ecological management strategies



Hyper connectivity plus neuro-enhancement—human neurological systems become an extended network as we map the impacts of our social interactions on our brains

The World of 2020 STARTS HERE

Place your Cards. Craft the Planet.



- Energy Return on Energy Investment
- Energy Efficiency
- The Carbon Marketplace



- Water Stress
- Virtual Water Balance of Trade
- Water as Feedback System



- Massively Multiplayer World Politics
- Cold War Over Global Warming
- Open-Source Development



- SocialX Infrastructures
- A Suburb-to-Slum Continuum
- Urban Food



- The Gender Continuum
- The Neuro-Social Self
- Speciation

GROWTH: One Step Ahead of Disaster

Modest, erratic growth is driven by investments to avert looming disasters in climate, energy, water, food, and health.

CONSTRAINT: Sustainable Paths in a Low-Capital World

Sustainability norms shift local and global priorities away from productivity and wealth, toward happiness and creative participation.

COLLAPSE: Local Disasters, Regional Conflicts

Local and regional failures threaten the stability of the world, dislocate populations, and de-legitimize institutions.

TRANSFORMATION: Superstructured Systems

Buoyed by falling costs of coordination, organizational innovations focus on rapid adaptation to extreme environments.

Patchwork Infrastructure

Electric transport vs. biofuels
Natural gas vs. nuclear
Petroleum replacement materials

McDonald's electric vehicle charging stations
source: engadget.com

The Desalination Economy

Water is the new oil
Gross Water Production (GWP)
The water gap

Fund a challenge for low-water energy solutions.
regional ecosystems services markets
source: williamettepartnership.org

twitpay

payment service by SMS

Smart Cities

Smart vehicles
4D cities
Embedded governance

MIT's Citicar
source: cities.media.mit.edu

Consuming Identities

Autonomous networked identities
Gender as a recreational experience
A neural-enhancement gap

neural diagnosis and training
source: IFTF, stock

Carbon Game

carbon games: trading literacy
source: carbongame.org

Water Footprinting

Personal water footprints
Collaborative water monitoring
New low-water agriculture

Turn water into a reward system.
water efficiency labels
source: epa.gov/watersense

The New Exceptionalism

China First, India First
Mitigation vs. adaptation debates
Geoengineering

Transition Towns

SocialX infrastructures
Suburban reinvention
Cities as foodsheds

Design 20-minute walking neighborhoods.
source: re-burbia.com

Carbon Efficiency

Individual carbon quotas
Embedded carbon monitoring
Carbon games

Global Eco-Management

Global EGS targets
Management by simulation
Legal rights for nature

REBURBIA
new designs for suburbs
source: re-burbia.com

The Sustainable Self

Personal digital mirrors
High-def self-simulation
Eco-happiness

What can I do today:
Team with food, ag, and retail companies to reorganize by foodsheds.

Lost Opportunity

More climate disasters
Volatile energy, food, and materials prices
No carbon credit wealth

What the kids will say:
Invest in carbon-sustainable redevelopment.
"My great-grandfather made New Orleans wealthy."

River Basins in Trouble

Crop migration
Water famines
Militarization of water security

the water footprint network
water.org
new financial models for water

De-Legitimization

Worldwide loan defaults
Collapse of Bretton Woods institutions
End of globalization era

Playtest a global constitutional convention.
"What the kids will say:
"My great-grandmother built a sustainable food industry."

Feral Cities

Agricultural urban development
Slum mapping
Pro-poor movements

urban community gardening networks
source: detroitagriculture.com

Identity Hacking

Identity defense
Neural fingerprinting
Memory erasure

employee ID management in the cloud
Create low-cost diets that enhance biochemical happiness.

Africa Adapt

climate change response-networks
source: africa-adapt.net

Oceans of Invention

Undersea mapping
Ocean robotics
Open ocean IP

pollution detecting underwater robot
sampling the ocean for genetic materials
camera
source: camera.calit2.net

Somali pirates or Somali coast guard?

source: U.S. Navy in Wikimedia Commons

Biomimetic Cities

Radical architecture
Ultra-efficient materials
Growing surfaces

Analyze the impacts of policy at the molecular scale.
neuro-targeted political messaging

Neuro-Social Identities

Neurological theories of the self
Viral emotional networking
Neuro-social environments

viral happiness networks
source: Fowler & Christakis, bnl.com

Carbon Down-Scaling

Lightweight innovation
Molecular waste conversion
Molecular manufacturing

citizen environmental science networks
source: instructables.com

Globally Local Governance

Participatory governance experiments
Non-geographic representation
Neuro-social politics

slum network mapping in India
source: changemakers.com

Secure: Beware the Watchful Eyes

source: Kenneth Lee

Turn a city into a futures gameboard.
source: changemakers.com

Create a #happiness hashtag for Twitter.

source: changemakers.com