

# GLOBAL ROADMAP OF YOUTH INITIATIVES 2021: FOCUS ON EDUCATION

## Report 'The Future of Education'

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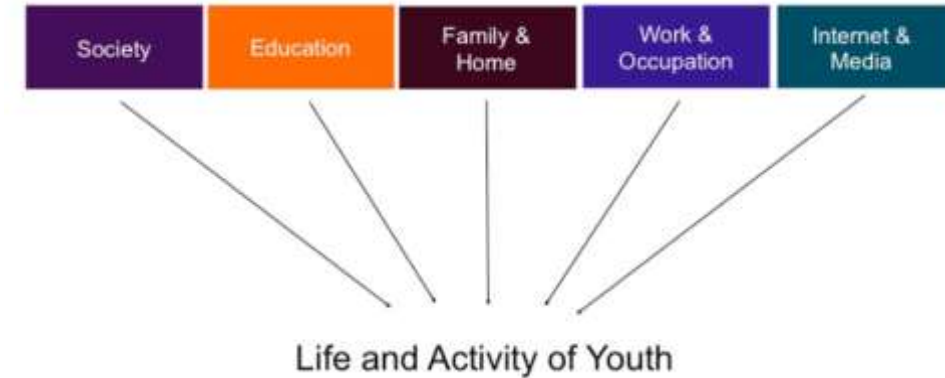
With Moderators and Participants of the Rhodes Youth Forum IV Annual Session 2013



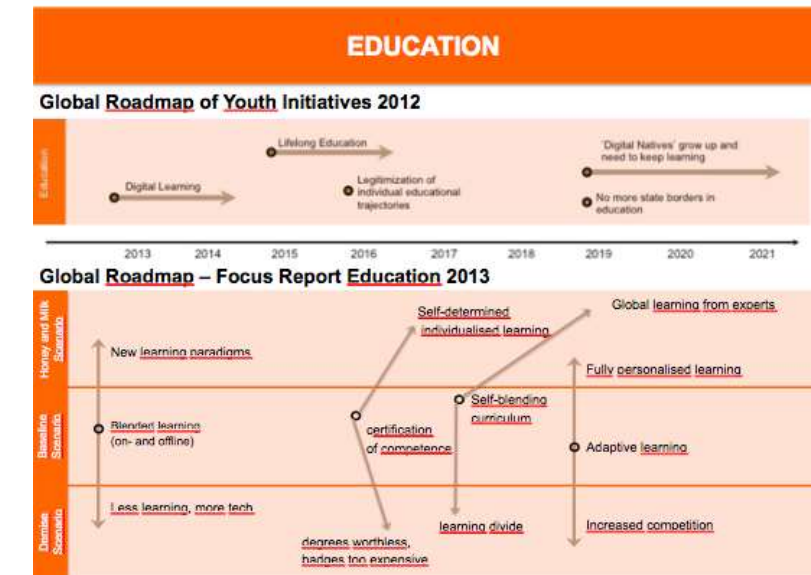
"A different world is possible. She is already on ist way. On quiet days, I can hear her breathe." – Arundhati Roy

## INTRODUCTION

- In October 2012, more than 100 active young people from over 50 countries met at the 3rd annual session of the Rhodes Youth Forum. They defined a global 'roadmap' of youth initiatives up to 2021.
- The Youth Time experts identified future events in five spheres of life that are most likely to influence the life and activity of young people of the next 10 years. A general roadmap for each of the five spheres was designed.
- In October 2013, more than 100 active young people from over 40 countries meet at the 4th annual session of the Rhodes Youth Forum to update this roadmap and to further refine it with a special focus on education.
- Each of the five spheres is looked at in detail in three different worlds: baseline, "honey and milk" and "demise" (see next page).
- This report summarises the results for the areas of education, family & home, internet & media, society, as well as work & occupation.
- Recommendations for existing and future Youth Time projects conclude each section.



Global Roadmap of Youth Initiatives 2012, p.3



Example of 2013 roadmap scenarios: Focus Report on Future of Education

# METHODOLOGY

- In Rhodes 2013, the Global Roadmap 2021 was developed further. The participants received a baseline scenario for each of the five spheres of life that were developed for Rhodes 2012. The baseline scenarios were further developments of the previous Roadmap version.
- A scenario in our work is understood not as a prediction, but as an estimated guess how the world could look like at a given date. We use them as a tool for foresight scenario development to identify how the world might develop and to clarify options for the future.
- For each of the baseline scenarios, four trends were defined that would shape the future, no matter how they turn out (see left).
- On the basis of the trends, milestone events were identified that would impact, shape or define crossroads for the future.
- The baseline scenarios were then used to develop radical deviations from our business-as-usual forecasts: a “honey and milk scenario” and a “demise scenario”.

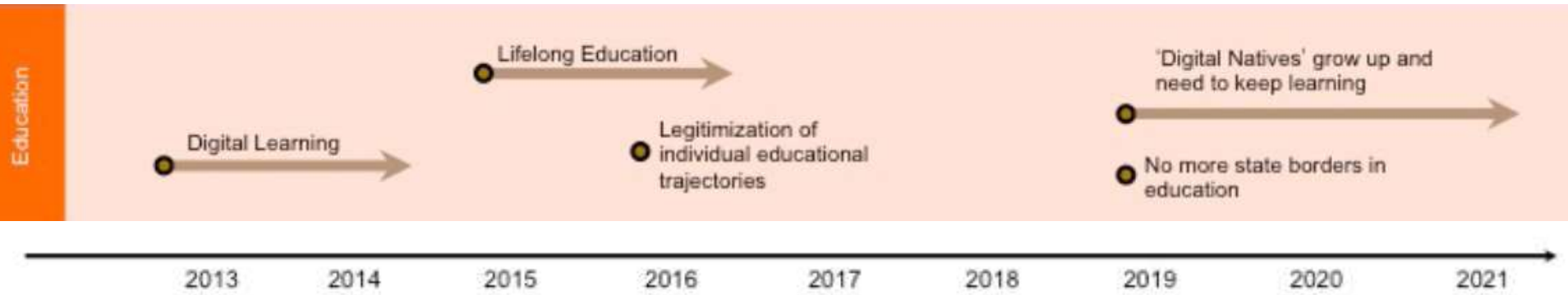
- “Honey and Milk“ Scenarios are progressive scenarios, characterised by the success of disruptive forces that cause change: 1) Trends turn truly global, with strong market penetration or reach, they materialise sooner and with more force. 2) Creative destructions and technology breakthroughs define the future. 3) Minorities or non-dominant forces gain the upper hand.
- “Demise“ Scenarios are conservative scenarios, driving existing structures to their extremes: 1) Trends stay regional or have fragmented reach, they materialise slower or less strongly. 2) Existing technologies expand their market share. 3) Existing power structures expand their influence and reinforce status quo.
- On the basis of their experience in projects, participants then answered three questions: what do I need to 1) change, 2) continue or 3) stop doing in my project if the future comes true as in the scenarios? The responses were then generalised. They form the basis for the recommendations for projects in each chapter.

# OVERVIEW OF TRENDS & TABLE OF CONTENTS

EDUCATION	Borderless Learning	Free Agent Learner	Lifelong Learning	Digital Learning	<ul style="list-style-type: none"> <li>• Executive Summary (p.3)</li> <li>• Baseline Scenario (p.4)</li> <li>• “Honey&amp;Milk“ Scenario (p.5)</li> <li>• “Demise“ Scenario (p.6)</li> <li>• Conclusion (pp.7-8)</li> </ul>
FAMILY & HOME	Family structure	Socio-economics	Family processes	Family culture	<ul style="list-style-type: none"> <li>• Executive Summary (p.9)</li> <li>• Baseline Scenario (p.10)</li> <li>• “Honey&amp;Milk“ Scenario (p.11)</li> <li>• “Demise“ Scenario (p.12)</li> <li>• Conclusion (pp.13-14)</li> </ul>
INTERNET & MEDIA	Digital Society	Internet business	Governance	Mobile co-creation	<ul style="list-style-type: none"> <li>• Executive Summary (p.15)</li> <li>• Baseline Scenario (p.16)</li> <li>• “Honey&amp;Milk“ Scenario (p.17)</li> <li>• “Demise“ Scenario (p.18)</li> <li>• Conclusion (pp.19-20)</li> </ul>
SOCIETY	Public services	Demographics	Smart living	Health	<ul style="list-style-type: none"> <li>• Executive Summary (p.21)</li> <li>• Baseline Scenario (p.22)</li> <li>• “Honey&amp;Milk“ Scenario (p.23)</li> <li>• “Demise“ Scenario (p.24)</li> <li>• Conclusion (pp.25-26)</li> </ul>
WORK & OCCUPATION	Global workforce	Work culture	Demographics	Technology	<ul style="list-style-type: none"> <li>• Executive Summary (p.27)</li> <li>• Baseline Scenario (p.28)</li> <li>• “Honey&amp;Milk“ Scenario (p.29)</li> <li>• “Demise“ Scenario (p.30)</li> <li>• Conclusion (pp.31-32)</li> </ul>

# EDUCATION – EXECUTIVE SUMMARY

## Global Roadmap of Youth Initiatives 2012



- The baseline scenario developed for RYF 2013 builds on above illustration. It adds the differentiation between a baseline scenario, a 'honey and milk' scenario and a 'demise' scenario (for combined results, see summary on the right).
- **Main trend:** Education will increasingly be digital, personalised, globalised, challenging existing institutions and focused on certifying competence instead of attendance.
- **Project take-aways:** The Youth Time projects in the educational sphere can choose to be leaders in developing new educational models or contribute to close the skills gap in the existing system, focusing on educational laggards.



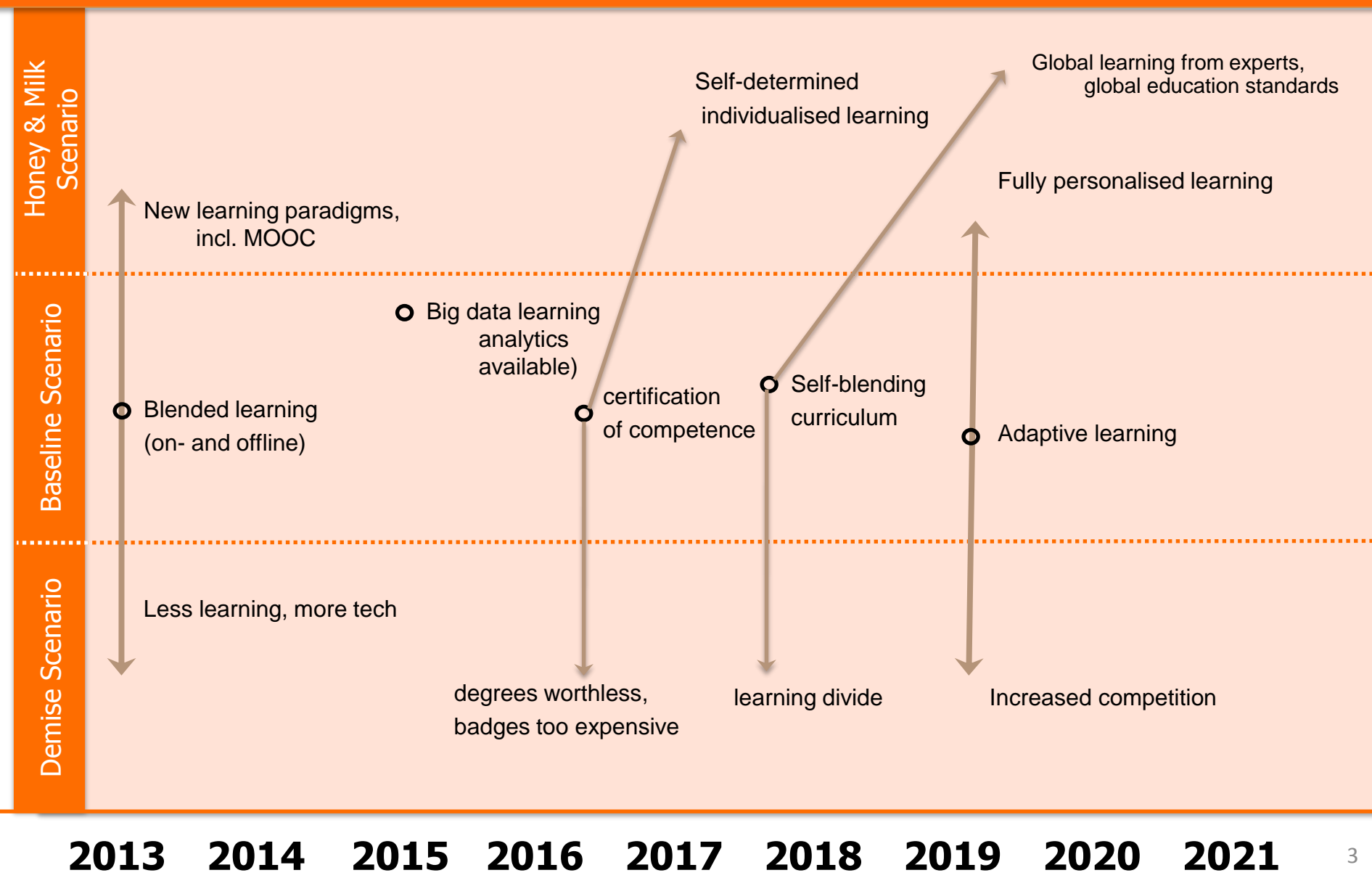
Borderless Learning

Free Agent Learner

Lifelong Learning

Digital Learning

# EDUCATION – SCENARIO SUMMARY



2013 2014 2015 2016 2017 2018 2019 2020 2021



# EDUCATION – BASELINE SCENARIO

Borderless Learning

- Elite boarding schools and universities open campuses and franchises overseas.
- Mass Open Online Courses start spreading in developing countries (boom of the virtual campus).

- Self-blending: students start combining their courses without geographic limits, working with experts

- The global talent pool explodes (see on the right).
- State borders start to fade in education

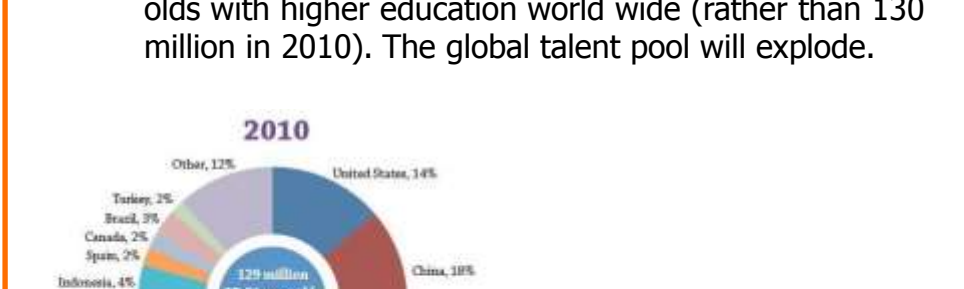
- By 2020, China and India will produce 40% of graduates from tertiary education from all G20 and OECD countries, as opposed to 29% in 2010. The US and EU will account for just 25%.
- In 2020, there will be more than 200 million 25-34 year olds with higher education world wide (rather than 130 million in 2010). The global talent pool will explode.

Free Agent Learner

- Careers are increasingly influenced by additional competence

- content and assessment starts being decoupled, demonstrated ability replaces attendance,

- Academia ceases to be the gatekeeper to education

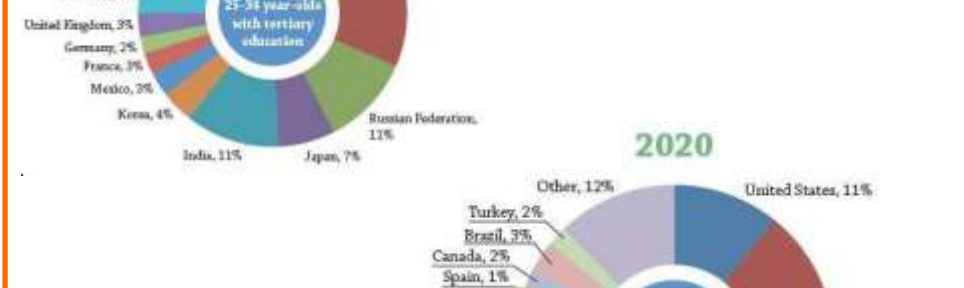


Lifelong Learning

- Explosion of knowledge challenges linear education trajectories

- Universities start certifying competence, not attendance
- Most people have 2+ careers

- Competency credentials like Mozilla Badges beginning to challenge degrees
- Vocational education is offered globally.



Digital Learning

- Blended learning (online and offline combined) develops.
- Digital content competes with the textbook

- Adaptive learning (students unlock next level of difficulty by demonstrating progress) is combined with big data learning analytics.

- Learning becomes personalised and increasingly catered to individual abilities.



**2013**      **2014**      **2015**

**2016**      **2017**      **2018**

**2019**      **2020**      **2021**

# EDUCATION – “HONEY & MILK” SCENARIO

Borderless Learning	<ul style="list-style-type: none"> <li>Elite boarding schools and universities open campuses and franchises overseas with possibility for global exchange.</li> <li>Virtual campus: elite education becomes inexpensive and more affordable</li> </ul>	<ul style="list-style-type: none"> <li>Overseas internships and global research collaboration</li> </ul>	<ul style="list-style-type: none"> <li>Education certificates are recognised in all states</li> <li>e-learning becomes possible in rural areas</li> <li>Global Union of Universities</li> <li>Introduction of global education standards</li> </ul>
Free Agent Learner	<ul style="list-style-type: none"> <li>Improved internet infrastructure empowers individuals</li> <li>Educational holidays are given to students to empower them to attend non-formal trainings</li> </ul>	<ul style="list-style-type: none"> <li>content and assessment starts being decoupled, demonstrated ability replaces attendance,</li> <li>First recognitions of individually composed curricula</li> <li>non-formal trainings become part of obligatory curriculum</li> </ul>	<ul style="list-style-type: none"> <li>Academia ceases to be the gatekeeper to education and focuses on teaching the ethical profession</li> </ul>
Lifelong Learning	<ul style="list-style-type: none"> <li>Explosion of knowledge challenges linear education trajectories</li> </ul>	<ul style="list-style-type: none"> <li>Increased number of schools accounting for the dyslexic, autistic, blind, etc</li> <li>Most people have 2+ careers, universities react with special degrees</li> </ul>	<ul style="list-style-type: none"> <li>Competency credentials like Mozilla Badges beginning to complement degrees</li> <li>Vocational training is given at universities and finds official recognition worldwide.</li> </ul>
Digital Learning	<ul style="list-style-type: none"> <li>Blended learning (online and offline combined) develops.</li> <li>Explosion of free digital educational resources</li> </ul>	<ul style="list-style-type: none"> <li>Adaptive learning and big data allows for new digital educational paths</li> </ul>	<ul style="list-style-type: none"> <li>Learning becomes personalised and increasingly catered to individual abilities, whereas a global consensus emerges on what is a core curriculum</li> </ul>



2013	2014	2015	2016	2017	2018	2019	2020	2021
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# EDUCATION – “DEMISE” SCENARIO

Borderless Learning	<ul style="list-style-type: none"> <li>Less and less people can afford elite education</li> <li>MOOC cannot secure high-quality learning</li> </ul>	<ul style="list-style-type: none"> <li>MOOC and self-blending challenges the model of the professor – career paths change, unemployment in high-paid academic jobs</li> <li>Many islands of isolation with little quality and high barriers to borderless education</li> </ul>	<ul style="list-style-type: none"> <li>Global talent unfit for job market</li> <li>State borders prevent recognition of overseas qualifications</li> </ul>
Free Agent Learner	<ul style="list-style-type: none"> <li>Courses offered fail to match reality in the job market</li> <li>students follow their interests not the market needs and are not well qualified</li> </ul>	<ul style="list-style-type: none"> <li>Fake sense of education and knowledge restricts curiosity and individual learning</li> <li>Knowledge, not skills are tested in online courses – graduates fail at workplace</li> </ul>	<ul style="list-style-type: none"> <li>Narrow specialists outrank by far the necessary generalists</li> </ul>
Lifelong Learning	<ul style="list-style-type: none"> <li>Explosion of knowledge challenges existing job profiles while people already in jobs do not have enough time to further qualify themselves</li> </ul>	<ul style="list-style-type: none"> <li>Most people have 2+ careers – but fail to reach the same level of efficiency and expertise in their second career</li> </ul>	<ul style="list-style-type: none"> <li>Badges and certificates compete and lead to confusion on what a valid education is</li> <li>Vocational education is offered only in certain regions</li> </ul>
Digital Learning	<ul style="list-style-type: none"> <li>Blended learning (online and offline combined) develops.</li> <li>Digital learning material continues to suffer from the wiki-phenomenon: unreliable quality</li> </ul>	<ul style="list-style-type: none"> <li>Big data analytics turns learning into a quantitative automatism – quality of learning decreases.</li> </ul>	<ul style="list-style-type: none"> <li>Personal bias makes individualised learning incomplete</li> <li>Trend towards standardisation limits creativity and progress stalls</li> <li>Blended learning fails to solve the challenge of combining practical elements like laboratory work with online work – chemistry etc suffer</li> </ul>



2013	2014	2015	2016	2017	2018	2019	2020	2021
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# EDUCATION – SUMMARY

## Introduction: educational trends

- The way societies organise their education influence their success, their values, their production and their societal structures.
- Already in a scenario that simply extrapolates existing trends, we can see a significant change in education. The future of education will be borderless, lifelong, digital and based on the paradigm of the free agent learner (=someone who is individually responsible for his learning).

## Trend 1: Borderless Learning

- Mass Open Online Courses will contribute to the boom of the virtual campus. Competence-attainment is not geographically bound anymore.
- Students increasingly start to self-blend their curricula as they have easier access to the real experts.
- New education paradigms from different cultures will gain importance.

## Trend 2: Free agent learner

- Careers are increasingly influenced not by degrees but by additionally gained competence.
- Increasingly, it counts more what you know than where you learnt it.
- Academia is increasingly challenged as educ. gatekeeper.

## Trend 3: Lifelong Learning

- Available knowledge explodes. Knowledge management becomes increasingly important.
- A second career with a second education increasingly becomes thinkable.
- Universities have to re-invent their business model and include certifying competence rather than mastery of fields of knowledge. Ethics will become a distinctive mark.

## Trend 4: Digital Learning

- Bricks and clicks: Blended learning increasingly combines online and offline content.
- Students increasingly learn with adapted curricula.
- Learning analytics increasingly shapes how students learn what when and how quickly.

## Potential surprises

- As China and India are expected to account for 40% of graduates from tertiary education in OECD & G20 countries by 2020, their educational systems will increase impact.
- Radical economic and societal changes will impact education (see other chapters).
- Non-formal education might change the educational system more than expected. Gamification might have a game changing impact.

## Recommendations for projects

- In a world of individualised and borderless education, projects will compete with a global supply of interesting alternatives. They will need to be relevant both in a digital world and a society that learns life long.
- Generally, the more positive the trends of digital learning, lifelong learning, free agent learner and borderless learning evolve, the more will current Youth Time projects benefit.
- In terms of education, developing countries have the biggest need for solutions in terms of numbers, whereas developed countries are in dire need of innovative education paradigms. Developing countries might be exporters of these new approaches.
- Access to education remains a big topic. It might be interesting to start building data centers in rural/poor areas to increase access to education and to be part of the process of globalisation and counter brain drain.
- Specialist education will still be needed. The combination of skill and knowledge will increasingly be in demand.

## Recommendations for educational projects

- Digital learning, individualised learning and non-formal education are the trends of the day. Projects in these areas are likely to be most interesting on the current market of ideas.
- System approaches that offer customised but comprehensive solutions are in great demand these days.
- The question of how to use big data learning analytics and how to certify competence are waiting for scaleable solutions.
- There continues to be a strong need to teach code as the foreign language of the future.
- Teaching languages online is a trend, global competition will increase the quality of the courses. Be aware that minority languages might be endangered in the process.
- Make sure to optimise courses for low-quality internet.
- The skills gap between what is taught and what is needed will continue to exist. Projects need to be aware of this trend and make sure to include practical skills – particularly in online courses.
- Conservative pedagogical methods will continue to be the benchmark. Offer interaction and experience instead.

Borderless  
Learning

Free Agent  
Learner

Lifelong  
Learning

Digital  
Learning

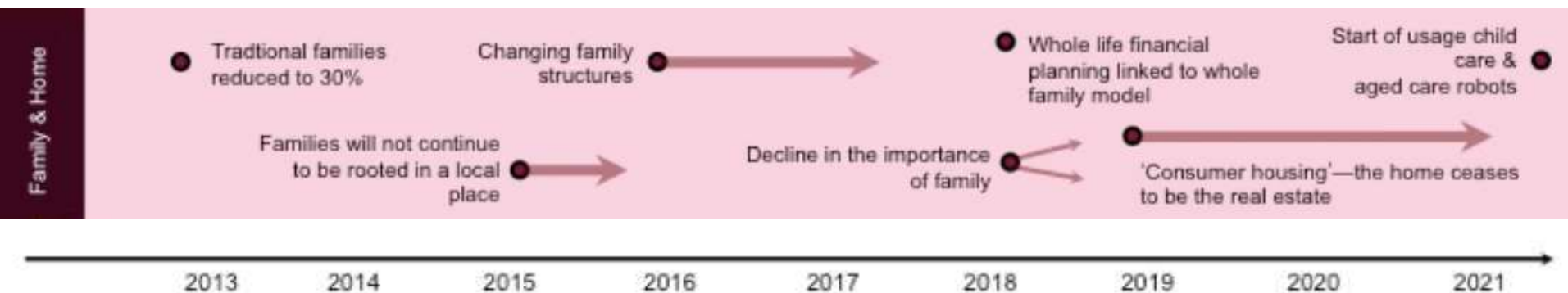
# EDUCATION – LINKLIST

- *NMC Horizon Report - 2013 K-12 Edition, in particular on MOOC and learning analytics* <http://www.nmc.org/publications/2013-horizon-report-k12>
- PEW Research Center's Internet & American Life Project – Future of Higher Education <http://pewinternet.org/Reports/2012/Future-of-Higher-Education/Overview/Introduction-and-overview-of-responses.aspx>
- Self-blending in Utah and Louisiana <http://www.teachthought.com/technology/10-significant-trends-in-education-and-online-learning/>
- Virtual learning in New Zealand and Australia <http://www.core-ed.org/thought-leadership/ten-trends/ten-trends-2013/virtual-learning>
- Digital content learning and personalised learning in Flex Academies <http://getttingsmart.com/2012/10/iprep-the-miami-flex/>
- Apple's digital textbook strategy <http://online.wsj.com/article/SB10001424052970204555904577169523446883172.html> and <http://www.teachthought.com/trends/education-2020-a-vision-of-learning-decentralized-and-free/>
- Competency-based learning/adaptive learning: Khan Academy <https://www.khanacademy.org/>
- Performance-based funding in Florida, Utah, Louisiana <http://www.teachthought.com/technology/10-significant-trends-in-education-and-online-learning/>
- Decoupling attendance and ability <http://www.teachthought.com/trends/education-2020-a-vision-of-learning-decentralized-and-free/>
- Badges system of Mozilla Foundation <http://www.openbadges.org/faq/>
- Learning analytics and big data: Khan Academy <http://www.core-ed.org/thought-leadership/ten-trends/ten-trends-2013/data-engagement>
- Mass Open Online Courses <http://www.teachthought.com/learning/50-top-sources-of-free-elearning-courses/>  
<http://www.policymic.com/articles/21832/top-5-education-trends-in-2013>
- MOOC in India: Aurus Network <http://smallbiztrends.com/2013/01/edutech-education-technology-change-beyond-recognition.html>
- Global and oversea campuses of elite universities [http://www.chinadaily.com.cn/china/2013-05/31/content\\_16549393.htm](http://www.chinadaily.com.cn/china/2013-05/31/content_16549393.htm)
- Boarding school franchises in Asia <http://www.businessinsider.com/uk-private-schools-scrambling-to-asia-2013-5> and <http://edition.cnn.com/2012/09/03/world/asia/asia-education>
- *Vision 2020, Prof. J.S. Rajput for the Indian National Council of Educational Research and Training* [www.planningcommission.nic.in/reports/genrep/bkrap2020/14\\_bg2020.pdf](http://www.planningcommission.nic.in/reports/genrep/bkrap2020/14_bg2020.pdf)
- *On the way to 2020: data for vocational education and training policies, Cedefop* [www.cedefop.europa.eu/EN/Files/5531\\_en.pdf](http://www.cedefop.europa.eu/EN/Files/5531_en.pdf)
- *The Shape of Things to Come: Higher Education Global Trends and Emerging Opportunities to 2020, British Council* <http://ihe.britishcouncil.org/educationintelligence/products/other-research>
- *Education Indicators in Focus, OECD* <http://www.oecd.org/dataoecd/62/53/50495363.pdf>



# FAMILY & HOME – EXECUTIVE SUMMARY

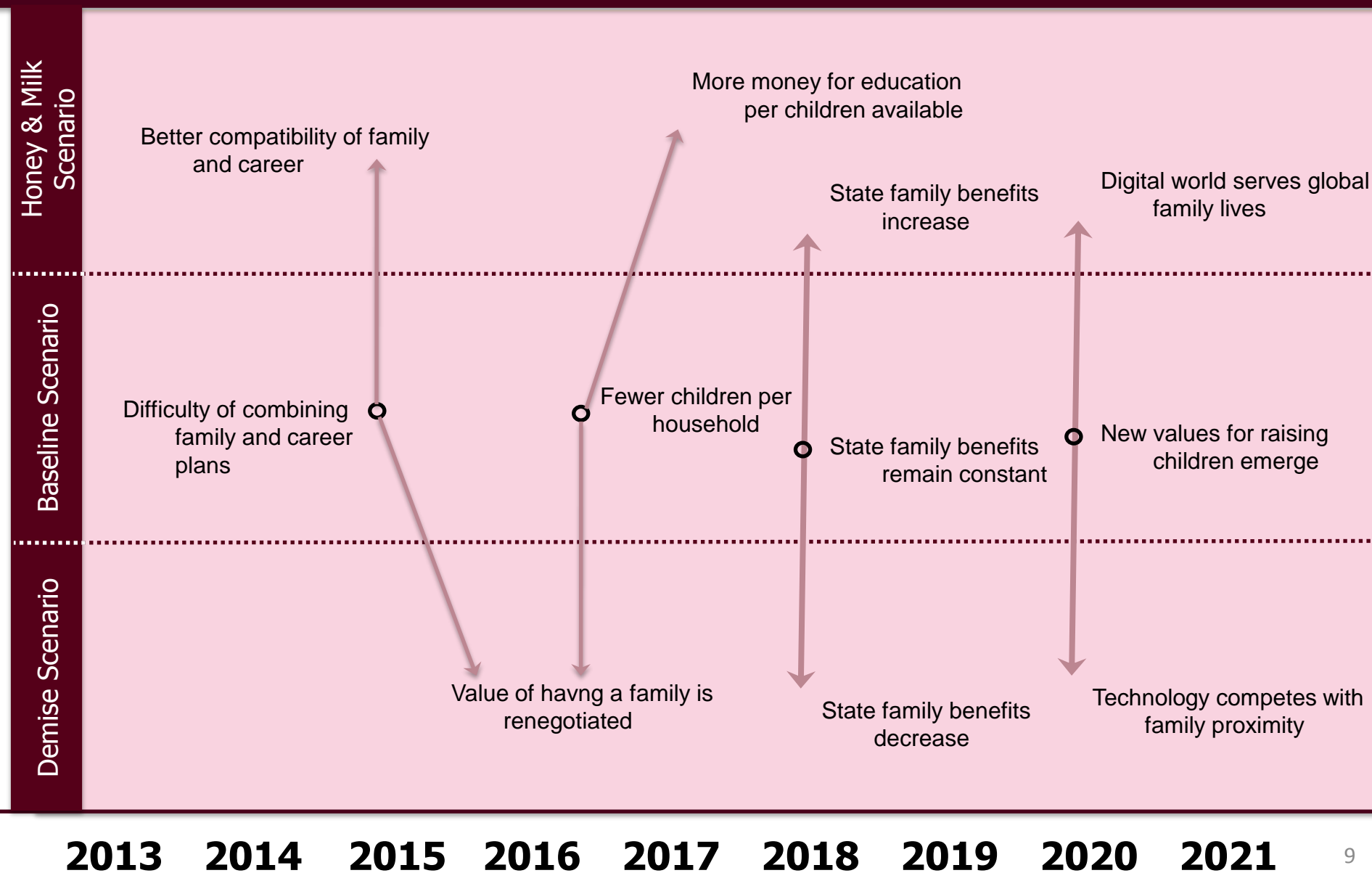
## Global Roadmap of Youth Initiatives 2012



- The baseline scenario developed for RYF 2013 builds on above illustration. It adds the differentiation between a baseline scenario, a 'honey and milk' scenario and a 'demise' scenario (for combined results, see summary on the right).
- **Main trend:** Family structures are likely to be less traditional, more colourful. Reconciling career and family plans will continue to challenge families. Family values might be re-defined in the light of societal and technological changes.
- **Project take-aways:** The Youth Time projects can be relevant by addressing these trends and offering orientation in a changing time. The feasibility or shape of many projects will indirectly be affected.



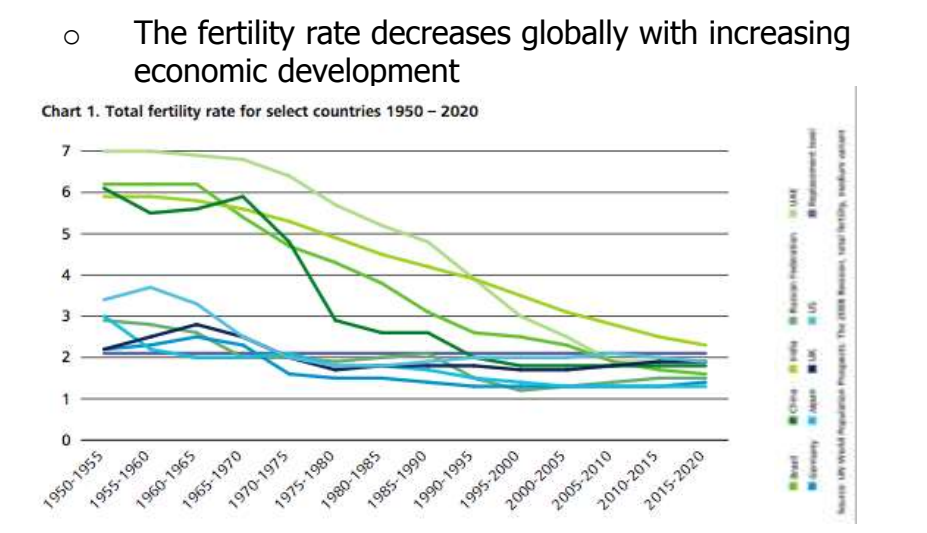
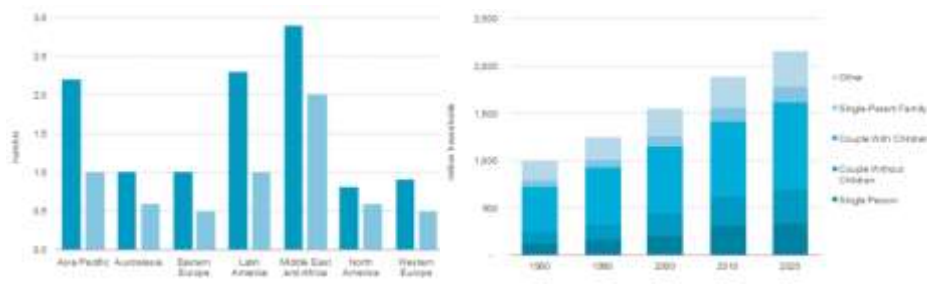
# FAMILY & HOME – SCENARIO SUMMARY



# FAMILY & HOME – BASELINE SCENARIO

Family Structure	<ul style="list-style-type: none"> <li>Extended family continues to exist in Asia and Middle East             <ul style="list-style-type: none"> <li>Proportion of children living with single parents increases in Western world.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Marriage rates decrease while cohabitation increase             <ul style="list-style-type: none"> <li>Fertility rate continues to drop globally, even in regions with high fertility rate</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Nonmarital childbearing rates increase worldwide             <ul style="list-style-type: none"> <li>Number of children per household decreases as a global trend. Apart from Middle East and Africa, all regions have less than 2.0 children per household</li> </ul> </li> </ul>
Socio-economics	<ul style="list-style-type: none"> <li>Rate of affected children by poverty and undernourishment increases in poor countries             <ul style="list-style-type: none"> <li>23 cities globally reach population of over 10 million, 19 of which in developing countries.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>An increasing number of women delay family planning to pursue careers             <ul style="list-style-type: none"> <li>More money per child available to invest in education</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Government spending on family benefits remains constant             <ul style="list-style-type: none"> <li>50% of the population in developing countries lives in urban areas</li> </ul> </li> </ul>
Family processes	<ul style="list-style-type: none"> <li>Level of satisfaction with family life increases</li> </ul>	<ul style="list-style-type: none"> <li>Levels of conflict over household work will remain constant             <ul style="list-style-type: none"> <li>Children benefit from multicultural environments, but families are strained by global mobility</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The role of family meals remains constant             <ul style="list-style-type: none"> <li>The digital world starts to be integrated into family life</li> </ul> </li> </ul>
Family culture	<ul style="list-style-type: none"> <li>Level of acceptance of voluntary single motherhood increases             <ul style="list-style-type: none"> <li>Cohabitation instead of marriage continues as a Western phenomenon</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The opinion that a child needs a home with mother and father to grow up happy will remain dominant             <ul style="list-style-type: none"> <li>The number of children drops, but they receive more attention.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>New values for raising children emerge for the 2020s taking into account globalised trends and patchwork families             <ul style="list-style-type: none"> <li>The tendency to form a family remains constant</li> </ul> </li> <li>The level of family trust remains high</li> </ul>

- The number of children per household decreases as a global trend until 2020 while global population ages.
- The number of households will increase globally. Relatively to the entire population, couples with children will decrease in comparison with other household structures.



2013	2014	2015	2016	2017	2018	2019	2020	2021
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# FAMILY & HOME – “HONEY & MILK” SCENARIO

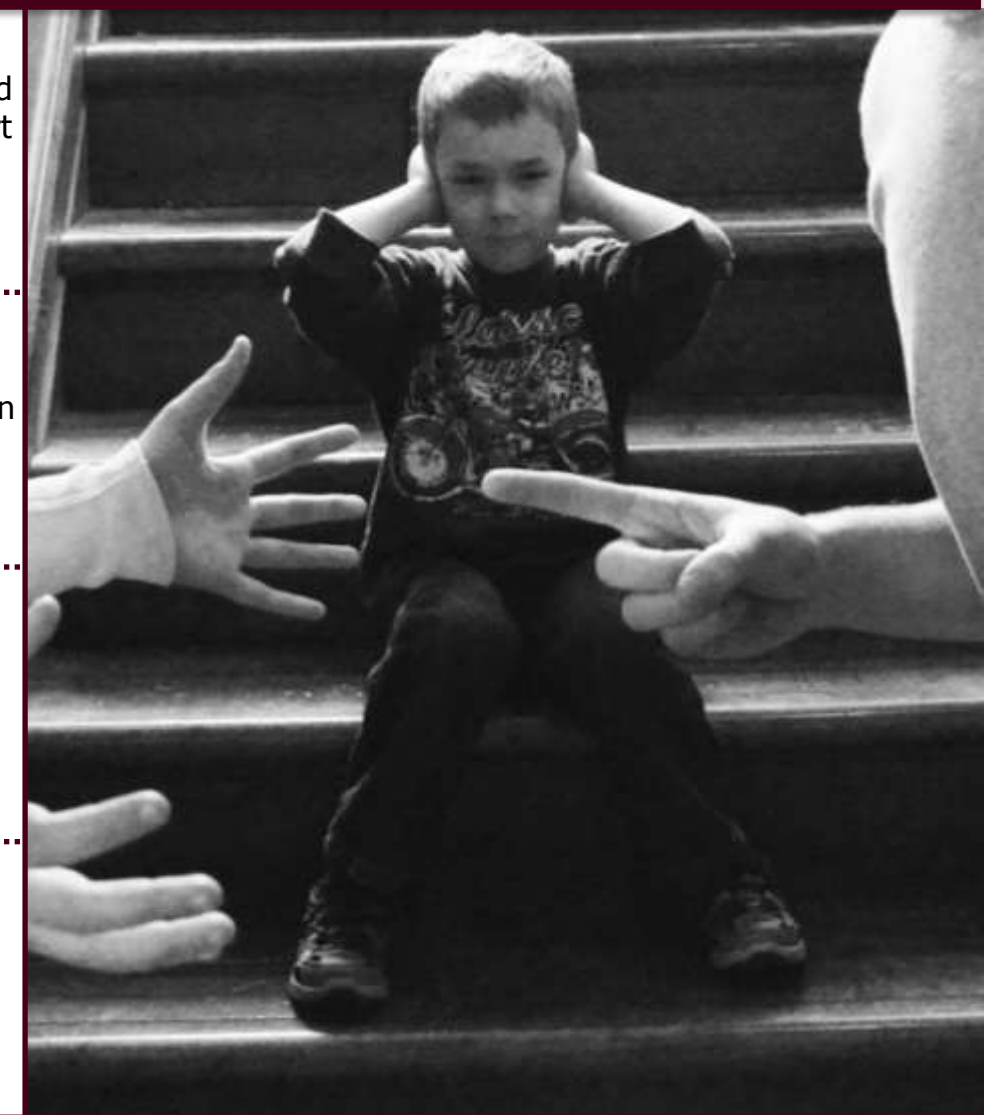
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Family Structure	<ul style="list-style-type: none"> <li>Extended family continues to exist in Asia and Middle East</li> <li>Increase of adoption</li> </ul>					<ul style="list-style-type: none"> <li>Abolishment of child marriage in many developing countries</li> </ul>		<ul style="list-style-type: none"> <li>Stabilisation of children per household after years of decrease in some developed countries</li> </ul>	
Socio-economics	<ul style="list-style-type: none"> <li>Rate of affected children by poverty and undernourishment decreases in poor countries</li> </ul>			<ul style="list-style-type: none"> <li>An increasing number of women are able to integrate family and career plans</li> </ul>	<ul style="list-style-type: none"> <li>More money per child available to invest in education</li> <li>Increase of economic stability in developing countries</li> </ul>		<ul style="list-style-type: none"> <li>Government spending on family benefits increases</li> <li>Less population, more economic growth</li> </ul>	<ul style="list-style-type: none"> <li>50% of the population in developing countries lives in urban areas</li> <li>Better education but smaller workforce: more employment opportunities for the young</li> </ul>	
Family processes	<ul style="list-style-type: none"> <li>Level of family satisfaction life increases</li> </ul>			<ul style="list-style-type: none"> <li>Children benefit from multicultural environments, modern technologies enable communication over far distances</li> <li>Equality in a marriage an increasingly accepted factor worldwide</li> </ul>				<ul style="list-style-type: none"> <li>The digital world starts to serve family life</li> </ul>	
Family culture	<ul style="list-style-type: none"> <li>Fewer women depend economically on men</li> </ul>			<ul style="list-style-type: none"> <li>Higher levels of tolerance for different lifestyles stretches cultural traditions</li> <li>The number of children drops, but they receive more attention.</li> </ul>			<ul style="list-style-type: none"> <li>New values for raising children emerge for the 2020s</li> <li>The tendency to form a family increases</li> </ul>		





# FAMILY & HOME – “DEMISE” SCENARIO

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Family Structure				<ul style="list-style-type: none"> <li>Many children grow up without close relationship to father</li> </ul>	<ul style="list-style-type: none"> <li>Fertility rate continues to drop globally, even in regions with high fertility rate</li> </ul>		<ul style="list-style-type: none"> <li>Nonmarital childbearing rates explode worldwide</li> </ul>	<ul style="list-style-type: none"> <li>Number of children per household decreases as a global trend. Apart from Middle East and Africa, all regions have less than 2.0 children per household</li> </ul>	
Socio-economics	<ul style="list-style-type: none"> <li>Rate of affected children by poverty and undernourishment increases in poor countries</li> <li>Criminality rates increase</li> </ul>	<ul style="list-style-type: none"> <li>Urbanisation and (international) flexibility challenges family cohesion.</li> </ul>		<ul style="list-style-type: none"> <li>An increasing number of women delay family planning indefinitely</li> </ul>			<ul style="list-style-type: none"> <li>Government spending on family benefits decreases</li> </ul>	<ul style="list-style-type: none"> <li>50% of the population in developing countries lives in urban areas</li> </ul>	
Family processes		<ul style="list-style-type: none"> <li>Level of family satisfaction life decreases with increasing global migration movements</li> </ul>		<ul style="list-style-type: none"> <li>Parents increasingly stretched in attempt to combine family and career</li> </ul>	<ul style="list-style-type: none"> <li>The digital world starts to replace family life, particularly for teenagers</li> </ul>		<ul style="list-style-type: none"> <li>The role of family meals decreases, physical and technological interaction compete</li> </ul>		
Family culture		<ul style="list-style-type: none"> <li>Cohabitation instead of marriage spreads to developing countries</li> </ul>		<ul style="list-style-type: none"> <li>Re-negotiation of many family values such as responsibility and freedom in new family structures</li> <li>Value of having a family called increasingly in question</li> </ul>	<ul style="list-style-type: none"> <li>Single children are spoiled, do not develop enough social skills</li> </ul>		<ul style="list-style-type: none"> <li>New values for raising children emerge for the 2020s</li> <li>The 'perfect baby' becomes desirable with the rise of genetic screening</li> </ul>	<ul style="list-style-type: none"> <li>The tendency to form a family decreases strongly</li> </ul>	



<http://themarshfieldtimes.files.wordpress.com/2013/03/divorce.jpg>

# FAMILY & HOME – SUMMARY

## Introduction: Family & Home

- Traditionally, family has been defined as formed by men and woman linked through marriage, giving birth to children, in close relation with their dependents and relatives.
- The traditional family changes dramatically; non-traditional ways of forming family structures emerge increasingly.
- These changes impact family ties, socio-economical structures, internal family processes and family culture.

## Trend 1: Family Structure

- A decline in marriage rates is coupled with childbearing outside of marriage and non-marital childbearing increase in many regions. The highest rates of nonmarital childbearing will be in South America and Europe. The lowest rates will still be in Asia and Middle East.
- Fertility rate will decline worldwide to reach 2.8 children born per female in 2020. Adults will be more likely to be married in Africa, Asia and Middle East, and less likely in South America and Europe. The average rate of children per household in 2020 will be 1.0

## Trend 2: Family socioeconomics

- The causal connection between income and education will grow stronger. The lowest levels of parental educational attainment are in Africa, followed by Asia, the Middle East, and South America. The highest levels continue to be found in the Western world but changes with the economical rise of Asia and South America.
- 60% of world population lives in cities by 2020.

## Trend 3: Family Processes

- Between 6% (South Korea) and 39 % (Argentina) of 15-year-olds discuss political or social issues with their parents several times a week.
- The percentage of 15-year-olds who eat meals with their families regularly varies widely throughout the world, ranging from 62% in Israel to 94 percent in Italy.
- These trends will change due to technological developments.

## Trend 4: Family Culture

- In the majority of countries, most adults believe that working mothers can establish just as good relationships with their children as stay-at-home mothers can. Most adults believe that children need a home with both a mother and a father to grow up happily.
- Due to economic demands and values shifts, these trends will change. Changing consumer lifestyles, delayed family plans due to career priorities will impact families strongly.
- New values on raising children will develop for the 2020s.

## Potential surprises

- Economic recession might lead to a re-approach to family values
- The state might introduce policies for positive demographic trends.

## Recommendations for projects

- Changing family structures and family socioeconomics change the target group of Youth Time projects. Projects could focus on the changing fertility rates and family values.
- Family processes and cultures re-define our societal cores. Projects can help raise awareness and develop solutions.
- Economic stability, crime, employment and sustainable lifestyles are correlated. Consider offering projects that are comprehensive in their scope.
- Parent and heritage culture continue to shape our societies, make sure project take into account the family backgrounds of the participants.
- Poverty and the lack of father figures will continue to create needs for projects for the less advantaged.
- Make sure to offer projects that are affordable and accessible.
- Poverty limits the affordability and applicability of cultural projects. Urbanisation will also affect the reach of projects.
- Fewer children born might imply challenges for cultural heritages that some of the Youth Time projects focus on.

## Recommendations for educational projects

- Awareness raising is a worthwhile objective, consider though that a successful project needs to take into account that economic, cultural and societal factors limit or determine choices in part.
- Educational choices are often at least partly determined or influenced by family backgrounds. Consider comprehensive approaches.
- Less children means more focus on the individual children in education and will make more funds available per person.
- When and if family processes change, educational projects can take up these changes and offer (alternative) spaces for discussion, political socialisation and promotion of active citizenship.
- Raising children in non-traditional environments requires adapted approaches, which educational projects can address.
- Life plans, career choices and family planning need to be reconciled. Projects can offer orientation in this difficult process.

Family structure

Socio-economics

Family processes

Family culture

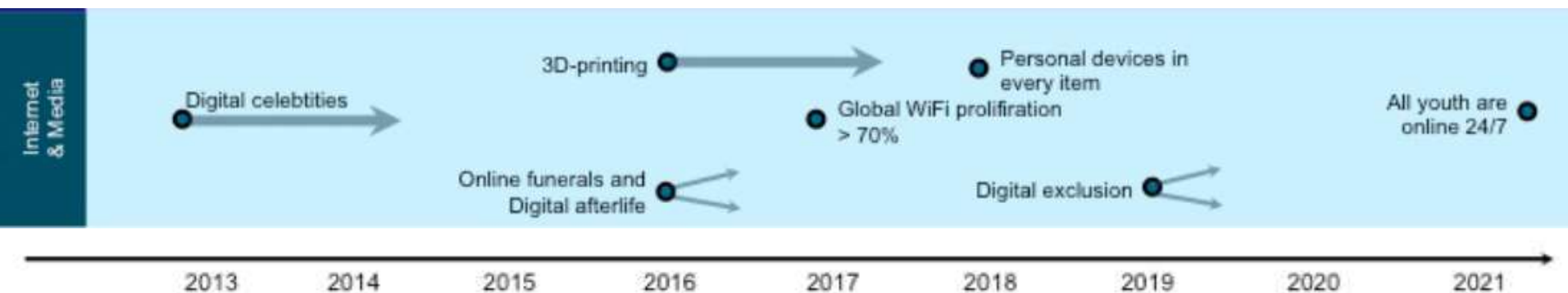
# FAMILY & HOME – LINKLIST

- World family map project: <http://worldfamilymap.org>
- World family map statistics: <http://worldfamilymap.org/2013/e-ppendix>
- Major Trends Affecting Families, UN studies: <http://undesadspd.org/Family/Publications/MajorTrendsAffectingFamilies.aspx>
- Adoption, Marriage, and Household Statistics: <http://www.infoplease.com/familytrends.html>
- Quick Facts from Family Trends: [http://www.familyandparenting.org/our\\_work/future-families/Family-Trends/Quick-Facts-from-Family-Trends](http://www.familyandparenting.org/our_work/future-families/Family-Trends/Quick-Facts-from-Family-Trends)
- Family Structure report: <http://www.childtrends.org/?indicators=family-structure>
- America's Families and Living Arrangements: 2006 , statistics: <http://www.census.gov/population/www/socdemo/hh-fam/cps2006.html> and <http://www.childtrends.org/?indicators=family-structure>
- Marriage and cohabitation: <http://www.childtrends.org/our-research/marriage-and-cohabitation/>
- Is the Family in Decline? (Demographics): <http://www.pobronson.com/factbook/pages/231.html>
- Fertility statistics: <http://www.civitas.org.uk/pubs/experiments.php#teenagers>
- Official Journal of American Academy of Pediatrics published online September 27, 2010: <http://pediatrics.aappublications.org/content/126/5/1012.full.html>
- Official Journal of American Academy of Pediatrics published online June 1, 2007: <http://pediatrics.aappublications.org/content/119/6/e1219.full>
- Euromonitor International <http://blog.euromonitor.com/2013/07/special-report-the-family-structure-of-the-future.html#sthash.isOPADkc.dpuf>
- The Guardian <http://www.theguardian.com/news/datablog/2009/aug/18/percentage-population-living-cities>
- Urbanization - Facts and Figures, UN Habitat <http://tinyurl.com/q7ggnp7>
- Consumer 2020 – Reading the signs, Deloitte <http://tinyurl.com/pbzosyd>



# INTERNET & MEDIA – EXECUTIVE SUMMARY

## Global Roadmap of Youth Initiatives 2012



- The baseline scenario developed for RYF 2013 builds on above illustration. It adds the differentiation between a baseline scenario, a 'honey and milk' scenario and a 'demise' scenario (for combined results, see summary on the right).
- Main trend:** The internet provides a new way of communicating, creates a digital parallel society with its own businesses and governance challenges. Privacy as a notion is an endangered cultural artefact.
- Project take-aways:** The Youth Time projects can react to these trends by developing offers that prepare society and youth for the new digital world. New skills and understanding can be offered by these projects.



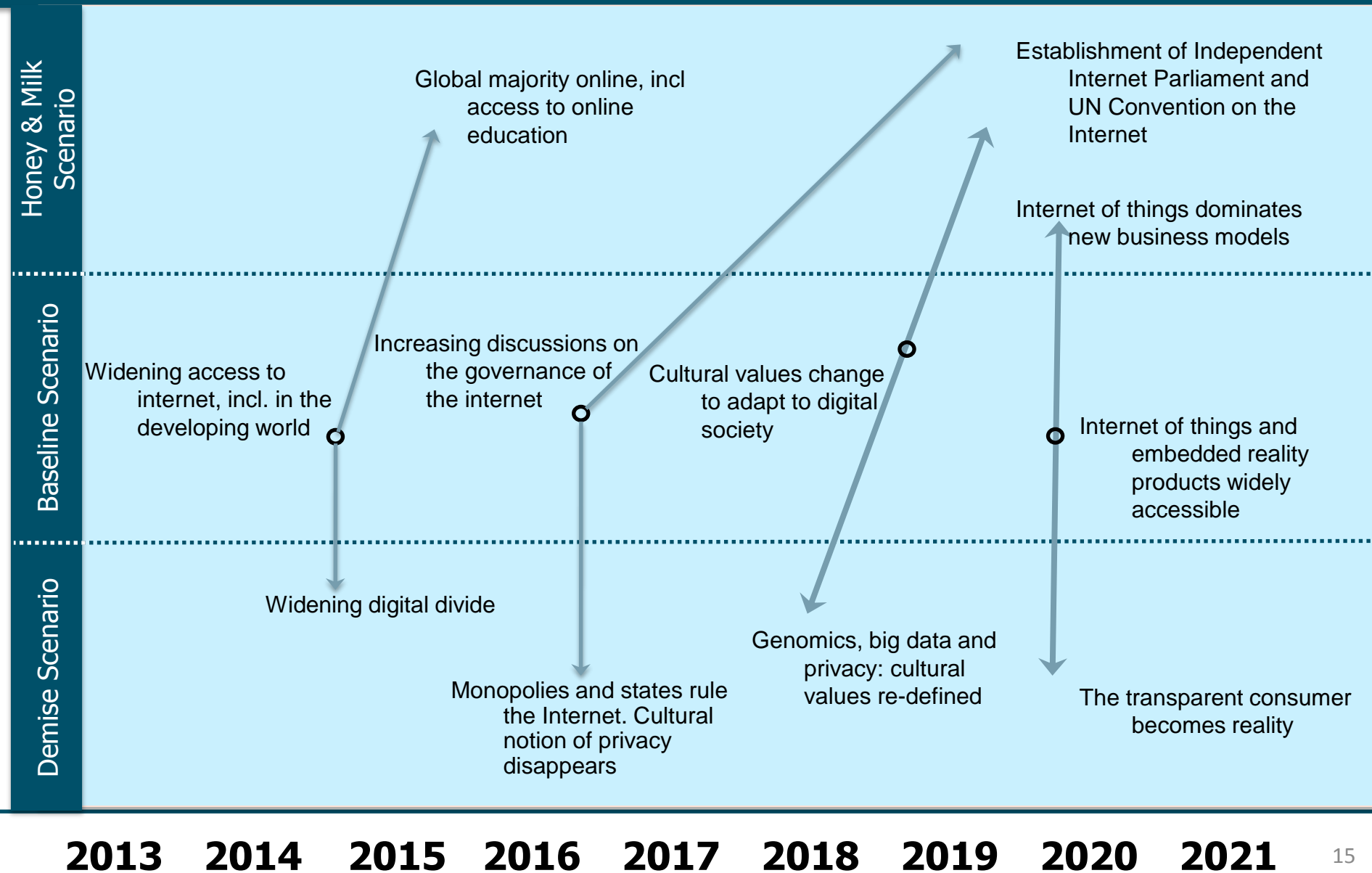
Digital Society

Internet business

Governance

Mobile co-creation

# INTERNET & MEDIA – SCENARIO SUMMARY



2013

2014

2015

2016

2017

2018

2019

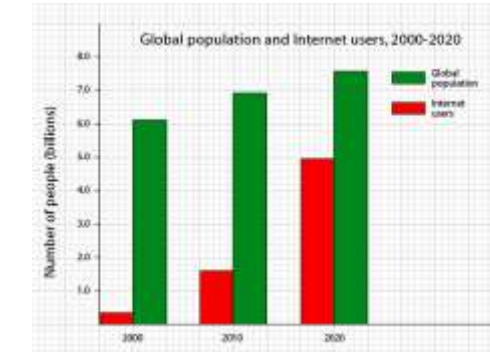
2020

2021

# INTERNET & MEDIA – BASELINE SCENARIO

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Mobile co-creation	<ul style="list-style-type: none"> <li>Online lectures are widespread</li> </ul>	<ul style="list-style-type: none"> <li>Developing countries get access to online education</li> </ul>	<ul style="list-style-type: none"> <li>Individualised news-creation: everybody can create oneself's own video news channel and become newsmaker</li> </ul>	<ul style="list-style-type: none"> <li>Cloud is standard storage facility</li> <li>Mobile internet is standard use in large parts of the world</li> </ul>	<ul style="list-style-type: none"> <li>The traditional print media business is defunct in many areas of the world. Internet TV is a serious challenge to normal television.</li> </ul>	<ul style="list-style-type: none"> <li>Broadband WiFi proliferation results in over 70% of population being online</li> </ul>			
Governance	<ul style="list-style-type: none"> <li>US discusses two speed internet</li> <li>Internet surveillance is widespread.</li> </ul>	<ul style="list-style-type: none"> <li>EU discusses governance structures for internet, incl. right to be forgotten</li> <li>Anonymity on internet increasingly challenged</li> </ul>	<ul style="list-style-type: none"> <li>Businesses, governments and society start battling over who controls and rules the internet</li> </ul>				<ul style="list-style-type: none"> <li>UN discusses global Internet Convention for global internet governance</li> </ul>		
Internet business	<ul style="list-style-type: none"> <li>More centralised internet (big corporations like google building their monopolies) meets stronger open source movement</li> </ul>	<ul style="list-style-type: none"> <li>Embedded reality products start penetrating the market (google glass, smart watch, RFID chips)</li> </ul>	<ul style="list-style-type: none"> <li>Genomics and big data changes pharmaceutical and medical professions</li> </ul>				<ul style="list-style-type: none"> <li>Virtual Global Teams: most people work online and international. Social networks penetrate work.</li> </ul>	<ul style="list-style-type: none"> <li>50 billion to 1 trillion devices are connected to one another via internet (internet of things) – enabling new business models</li> </ul>	
Digital Society	<ul style="list-style-type: none"> <li>Internet increasingly customised, no user sees the same internet – objectivity becomes evasive</li> </ul>	<ul style="list-style-type: none"> <li>Tech 'refuseniks' go permanently offline and boycott the internet.</li> <li>Digital celebrities are exported from Asian world to Western culture</li> </ul>	<ul style="list-style-type: none"> <li>Widening digital divide between those with and without internet access, either by choice, skill or economic marginalisation</li> </ul>	<ul style="list-style-type: none"> <li>Challenges of generation Z, who are becoming teenagers (new forms of language and communication are formed)</li> </ul>			<ul style="list-style-type: none"> <li>China, India and Africa substantially grow access to internet</li> </ul>	<ul style="list-style-type: none"> <li>5 billion users are online</li> </ul>	

- Internet will quickly expand its reach globally, in some regions by skipping physical networks and directly introducing WiFi and satellite internet



- However, large parts of the world remain unconnected for the time being.



# INTERNET & MEDIA – “HONEY & MILK” SCENARIO

Mobile co-creation	<ul style="list-style-type: none"> <li>○ Non-traditional education sources on the rise</li> <li>○ Limits of time and space in education are erased</li> <li>○ Developing countries get access to online education, more career options, more development</li> </ul>	<ul style="list-style-type: none"> <li>○ Developing countries begin to produce own culturally distinct educational digital curriculum</li> <li>○ Mobile internet is standard use in large parts of the world- internet as a common skill</li> </ul>	<ul style="list-style-type: none"> <li>○ Internet TV replaces normal television.</li> <li>○ Broadband WiFi proliferation results in over 90% of population being online</li> </ul>
Governance	<ul style="list-style-type: none"> <li>○ US discusses two speed internet</li> <li>○ Internet surveillance is widespread.</li> <li>○ EU establishes right to be forgotten</li> <li>○ Anonymity on internet is legally secured</li> </ul>	<ul style="list-style-type: none"> <li>○ Businesses, governments and society start battling over who controls and rules the internet – the role of minorities and minors comes into focus</li> </ul>	<ul style="list-style-type: none"> <li>○ Independent Internet Parliament is established</li> <li>○ States form standards guiding internet governance, access and support in the developing world through UN</li> </ul>
Internet business	<ul style="list-style-type: none"> <li>○ Embedded reality products generate new efficiencies that help reduce waste with RFID chips in production processes, increase business transparency</li> </ul>	<ul style="list-style-type: none"> <li>○ Big corporations form monopolies whilst open source technology is more agile and rapid that monopolies are not able to counter</li> <li>○ Emergence of an accepted digital currency</li> <li>○ Genomics and big data changes pharmaceutical and medical professions</li> </ul>	<ul style="list-style-type: none"> <li>○ internet of things dominates new business models</li> </ul>
Digital Society	<ul style="list-style-type: none"> <li>○ Internet tailored to own taste, objectives, ways of life – jungle of information simplified</li> <li>○ Tech 'refuseniks' keep being integrated into the society.</li> <li>○ Globalised world enables different cultures to learn from each other.</li> </ul>	<ul style="list-style-type: none"> <li>○ Closing digital divide between those with and without internet access, either by choice, skill or economic marginalisation</li> </ul>	<ul style="list-style-type: none"> <li>○ Africa uses access to internet to fully develop its potential</li> </ul>



**2013**                      **2014**                      **2015**                      **2016**                      **2017**                      **2018**                      **2019**                      **2020**                      **2021**



# INTERNET & MEDIA – “DEMISE” SCENARIO

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Mobile co-creation	<ul style="list-style-type: none"> <li>Technology gap between developed and developing countries widens, reducing ability to co-create</li> </ul>			<ul style="list-style-type: none"> <li>Online lectures only widely available in developed countries, resulting in an educational gap.</li> </ul>	<ul style="list-style-type: none"> <li>Informational marginalisation increasingly a problem</li> </ul>		<ul style="list-style-type: none"> <li>Personalised internet and news co-creation loses its appeal while print media lost its competitiveness.</li> </ul>	<ul style="list-style-type: none"> <li>Expensive utility computing</li> </ul>	
Governance	<ul style="list-style-type: none"> <li>Increased number of hackers and web attacks combined with corporate and public spying</li> </ul>	<ul style="list-style-type: none"> <li>No common political approach to internet governance, no EU internet policy</li> </ul>	<ul style="list-style-type: none"> <li>Information overload challenges public spheres and companies</li> </ul>	<ul style="list-style-type: none"> <li>Trade of private data increases, notion of privacy disappears</li> </ul>	<ul style="list-style-type: none"> <li>No integration of internet or media dimension into the UN's Millennium Development Goals after 2015</li> </ul>		<ul style="list-style-type: none"> <li>First massive digital terrorist attack</li> </ul>	<ul style="list-style-type: none"> <li>Governments and businesses move away from internet to secure their confidential data</li> </ul>	<ul style="list-style-type: none"> <li>Countries use censorship as preventive measure, directly impacting freedom of expression</li> <li>Countries go to war digitally with each other</li> </ul>
Internet business			<ul style="list-style-type: none"> <li>RFID chips and embedded products challenge notion of privacy and contribute to the fully transparent citizen.</li> </ul>	<ul style="list-style-type: none"> <li>Big corporations form monopolies, dominating the internet and its services</li> </ul>	<ul style="list-style-type: none"> <li>Genomics and big data combined create new preventive interventions</li> </ul>			<ul style="list-style-type: none"> <li>internet of things dominates new business models while non-digital products are crowded out of the market</li> </ul>	
Digital Society	<ul style="list-style-type: none"> <li>There is no difference anymore between a public and private identity</li> </ul>	<ul style="list-style-type: none"> <li>Tech 'refuseniks' create parallel societies</li> </ul>	<ul style="list-style-type: none"> <li>Globalised world drifts apart in marginalised and integrated regions</li> </ul>		<ul style="list-style-type: none"> <li>Cultural values are redefined to be compatible with the digital society</li> </ul>			<ul style="list-style-type: none"> <li>Alienation tendencies grow strong</li> </ul>	



# INTERNET & MEDIA – SUMMARY

## Introduction: internet & media

- With a technology that changes our ways of communicating and making business, we are currently defining a new era of interconnectivity.
- Our communication patterns, our interaction as societies, our business models and our forms of governance all adapt. The next years will lay the fundamentals for many years to come.

## Trend 1: Digital Society

- With the advent of a new form of communication and connectivity, society is changing, too.
- While some users cannot participate or do not want to participate, others start blending realities. Digital celebrities become a possibility.
- New generations develop their own language and communication styles that exclude older generations.

## Trend 2: Web-based business

- The internet becomes more centralised and big data and augmented reality is used to develop new business models.
- Teams increasingly work virtually and the reach of internet becomes truly global.

## Trend 3: Governance challenges

- The internet is possibly the last unregulated space left. In the next years, national and international government bodies will try to regulate.
- Questions to solve are, among others, net neutrality, anonymity and data protection.
- Business and government will battle over control of the internet both as infrastructure and communication tool.

## Trend 4: Mobile co-creation

- Internet connects mobility and allows co-creation at any given moment.
- From the creation of news and education to the sharing of information – internet will have few physical boundaries.

## Potential surprises

- Technological leaps are likely to surprise us and change our perception of what is possible.
- The issues of identity and objectivity remain unsolved and may fundamentally change the way we use internet.

## Recommendations for projects

- Internet & media projects will need to cater to the emerging lifestyle of a digital society between mobile co-creation and web-based business.
- Governance challenges arise that can be addressed by projects developing solutions and space for dialogue.
- Carefully choose your online strategy. Find a gap and innovate.
- Involve digital business to build virtual relationships between customers and businessmen. Government services should be more digital.
- Drive your marketing to be more internet-focused.
- Use internet to decrease logistical limits.
- Strengthen bond between virtual and real life. At the same time, safeguard and protect the liberties we have now.
- Begin to explore alternative forms of communication.
- Economic development in disadvantaged regions and the internet will be closely linked in the future. Provide practical internet-based solutions.
- Use internet in sharing information on global development.
- Contribute to closing the digital divide and to enabling people to participate in the internet society.

## Recommendations for educational projects

- The era of interconnectivity needs education that prepares the digital citizen to participate and master the information overload.
- Business skills needed in a web-based economy are different than those in the real economy. Educational projects can help deliver an understanding.
- Implement a new education paradigm. Have youth educate about the internet. Work on issues related to internet safety, share more information about the advantages and disadvantages of the internet.
- Promote media literacy. In the future, people will need to speak several languages: foreign languages and code – not only to be able to write programmes but also to understand how the internet works.
- Create individualised approaches to and through internet education.
- Rely increasingly on online trainings.
- The governance challenges of the digital society are manifold. Educational projects can deliver information, raise awareness and contribute to developing solutions and research.

Digital  
Society

Internet  
business

Governance

Mobile  
co-creation

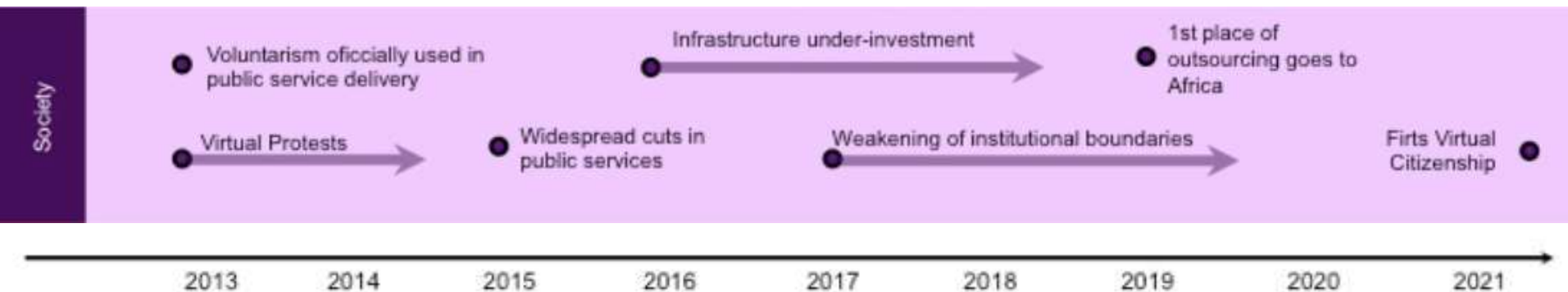
# INTERNET & MEDIA – LINKLIST

- Future Internet 2020 – Visions of an Industry Expert Group, European Commission <http://tinyurl.com/pk2o7uc>
- Towards the Future of Internet – Interrelation between Technological, Social and Economic Trends, Oxford Internet Institute <http://www.internetfutures.eu/wp-content/uploads/2010/09/future-internet-round-1-delphi-report-22mar2010.pdf>
- The Future of Internet, PEW Internet <http://www.pewinternet.org/Reports/2006/The-Future-of-the-Internet-II.aspx>
- Linking Cyber Security Policy and Performance, Microsoft <http://aka.ms/securityatlas>
- Big Data. The next frontier for innovation, competition and productivity, McKinsey Global Institute [http://www.mckinsey.com/insights/business\\_technology/big\\_data\\_the\\_next\\_frontier\\_for\\_innovation](http://www.mckinsey.com/insights/business_technology/big_data_the_next_frontier_for_innovation)
- Future Timeline, <http://www.futuretimeline.net/21stcentury/2020.htm#internet-2020>
- Trends & technology timeline 2010+, Richard Watson, [www.nowandnext.com](http://www.nowandnext.com)
- Future Scenario Resources Internet, Internet Society <http://www.internetsociety.org/internet/how-it%E2%80%99s-evolving/future-scenarios>
- Top 10 Future Trends: The Internet by 2020 <https://www.digitalpacific.com.au/blog/top-ten-future-trends-the-internet-by-2020/>
- <http://www.future-internet.eu/home/future-internet-assembly/poznan-october-2011/s12-networked-media-roadmap.html>
- <http://codeforces.com/>
- <http://community.topcoder.com/tc?module=MatchDetails&rd=15706>
- [http://students.pp.ua/news/pavel\\_durov\\_7\\_ehlementov\\_sistemy\\_obrazovaniya\\_xxi\\_veka/2012-05-17-280](http://students.pp.ua/news/pavel_durov_7_ehlementov_sistemy_obrazovaniya_xxi_veka/2012-05-17-280)
- <http://www.nielsen.com/us/en/newswire/2009/you-can-take-it-with-you-future-trends-in-media.html>
- <http://www.gencom.com/news-events-1/2015-the-vision-media-trends-and-challenges>
- Opening Education 2020 and beyond. Future scenarios for education in the age of new technologies. FutureLab
- Internet Trade 2030. Foresight Project by OPORA Russia SME roadmap to 2020-2030



# SOCIETY – EXECUTIVE SUMMARY

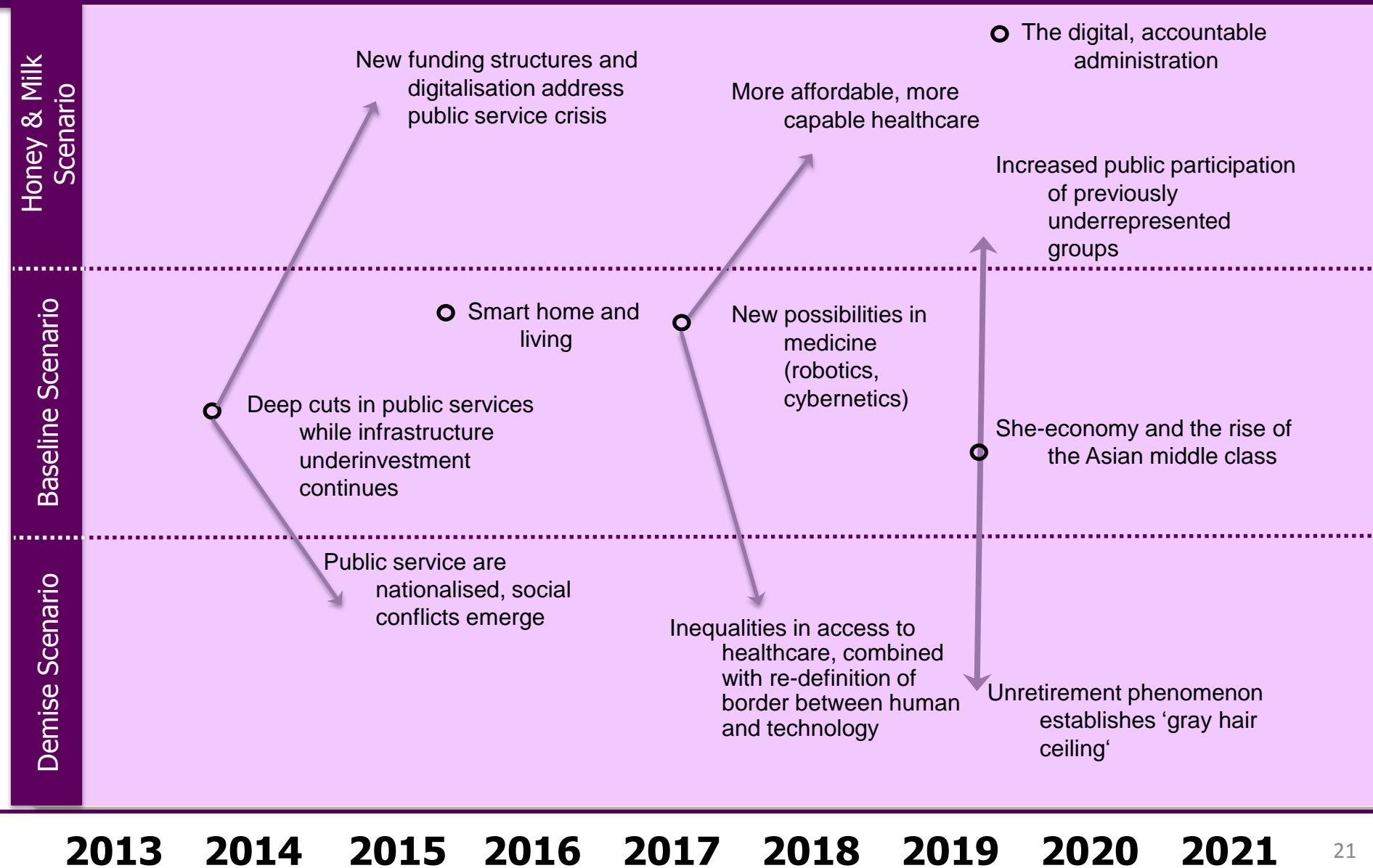
## Global Roadmap of Youth Initiatives 2012



- The baseline scenario developed for RYF 2013 builds on above illustration. It adds the differentiation between a baseline scenario, a 'honey and milk' scenario and a 'demise' scenario (for combined results, see summary on the right).
- **Main trend:** Society will change dramatically due to demographic and technological change. Many notions of identity and lifestyle might be re-defined.
- **Project take-aways:** The Youth Time projects can make advantage of these trends by addressing them proactively. Projects could provide the space for dialogue and information-sharing for this societal re-orientation.



# SOCIETY – SCENARIO SUMMARY



2013 2014 2015 2016 2017 2018 2019 2020 2021

# SOCIETY – BASELINE SCENARIO

Public services

- Deep cuts in public services in Western world are considered in attempt to solve public debt crisis

- Infrastructure underinvestment continues (new means of transport, climate adaptation, energy, water)
- Welfare systems on the brink of collapse in Western world, and desperately needed in rest of the world

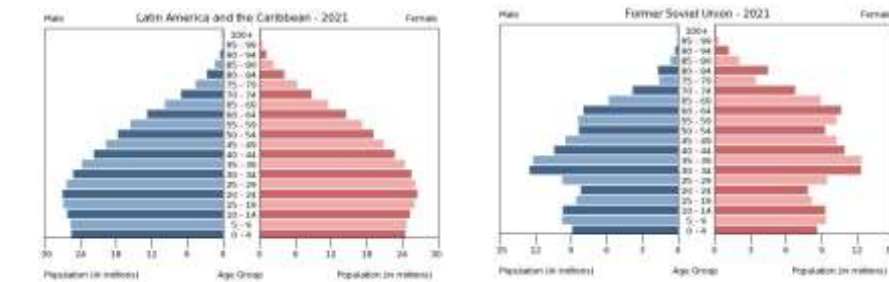
- Demographics continue to challenge public services. Russia, Canada, China, Europe, the US all have to manage increasing cohorts of retiring workers.
- The Arab World, Latin America, China, South East Asia and subsaharan Africa, Pakistan et al will gain even 30-60%

Demographics

- Young people account for 38% of global unemployment.
- In Africa and Middle East, 'youth bulges' continue to exist and push for participation

- The unretirement phenomenon enters Western world, 4 generations work together

- She-economy: rise of women in business
- Rise of the middle class: India and China alone add 1 billion to the market
- Top 25 cities account for 50% of world's wealth, China & India alone have 50 sustainable cities
- 1/3 of global population will be aged below 29.

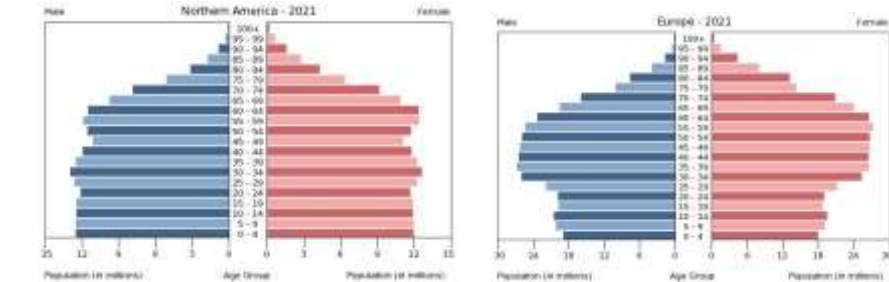


Smart living

- Digital communication is surveyed and analysed partly for business and government purposes

- Shopping and eating could offer digital labels, with nutrition and sustainability information
- Smart homes are able to help managing energy consumption and daily needs

- More than 40 cities globally are completely 'smart'
- RFID chips in clothes, packaging automate consumption, car driving is possible without control
- Culture of multiple layered realities emerges
- Robots are available for private use

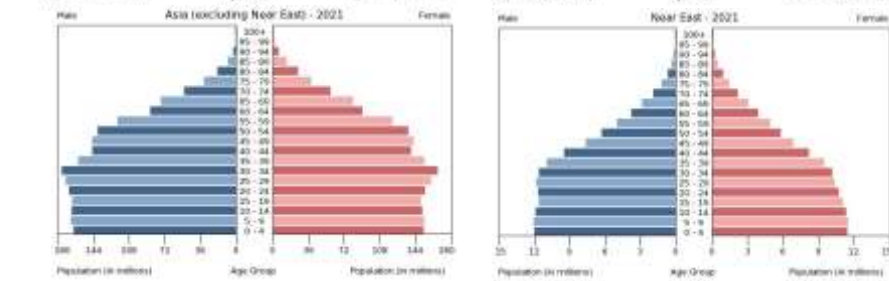


Health

- Physical augmentation is increasingly accepted
- Remote medical monitoring becomes possibility

- Prosthetics start be to combined with technology that enhances abilities
- Robotic surgery is increasingly used in hospitals

- Medicine is on track to find vaccine for HIV, has eradicated polio and other diseases



2013      2014      2015      2016      2017      2018      2019      2020      2021

# SOCIETY – “HONEY & MILK” SCENARIO

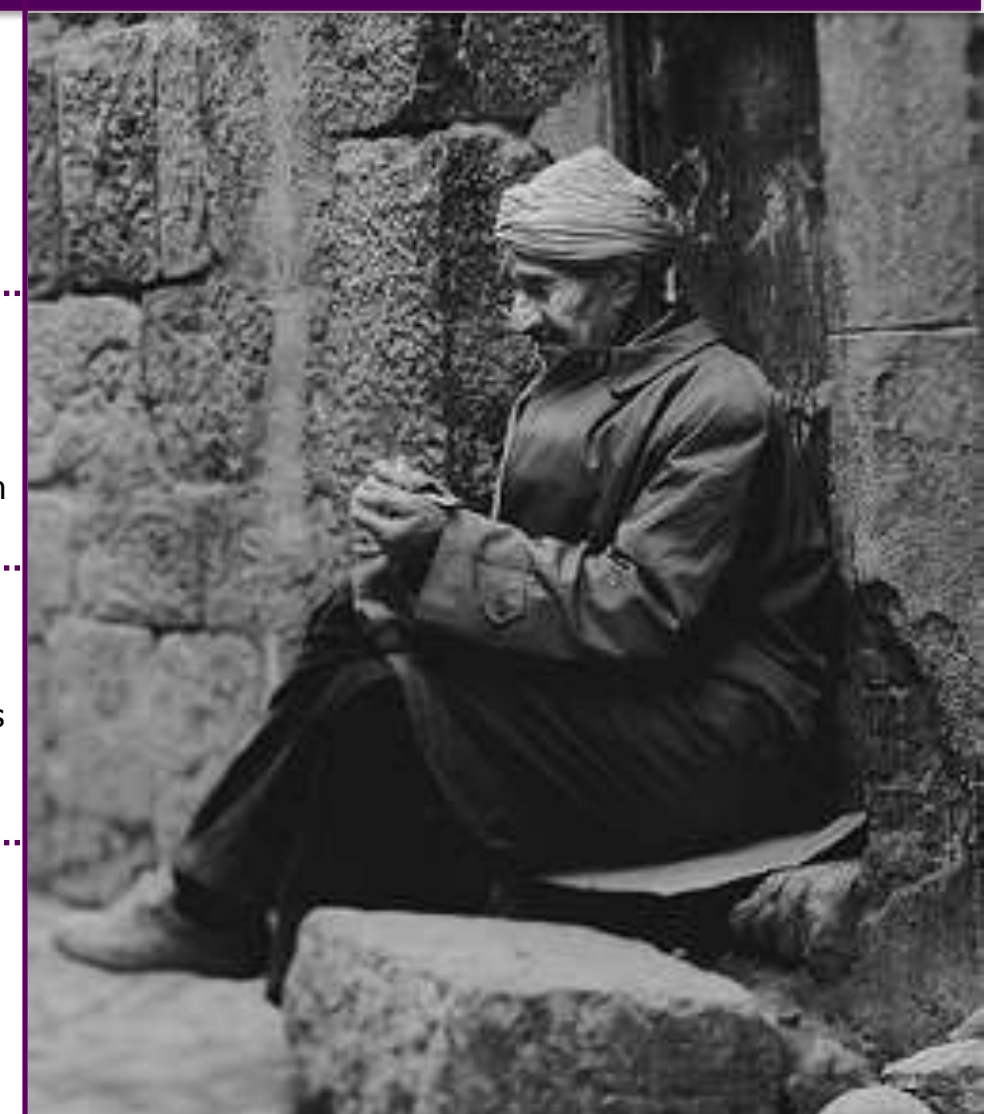
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Public services		<ul style="list-style-type: none"> <li>The funding crisis of public services is addressed successfully</li> </ul>	<ul style="list-style-type: none"> <li>One-stop shop for central services is established in Western world</li> </ul>	<ul style="list-style-type: none"> <li>Digital passports and health cards are combined</li> <li>Voting age is increasingly lowered to 16</li> </ul>				<ul style="list-style-type: none"> <li>Complete accountability and transparency of public services the new benchmark</li> <li>Digitalisation of public services</li> </ul>	
Demographics	<ul style="list-style-type: none"> <li>Young people account for 38% of global unemployment.</li> </ul>	<ul style="list-style-type: none"> <li>Entrepreneurship successfully creates jobs that employ significantly more young people</li> </ul>			<ul style="list-style-type: none"> <li>The unretirement phenomenon enters Western world, 4 generations work peacefully together</li> </ul>		<ul style="list-style-type: none"> <li>30% of young people are involved in decision-making.</li> <li>Minority groups are integrated into the mainstream decision-making process.</li> </ul>	<ul style="list-style-type: none"> <li>50% of women in public administration</li> <li>1/3 of global population will be aged below 29.</li> </ul>	
Smart living		<ul style="list-style-type: none"> <li>The privacy of digital communication is ensured</li> </ul>		<ul style="list-style-type: none"> <li>Mobile phone and internet are spread worldwide</li> <li>Shopping and eating offer digital labels, with nutrition and sustainability information</li> </ul>	<ul style="list-style-type: none"> <li>Smart homes become reality, helping to manage energy consumption and daily needs</li> </ul>		<ul style="list-style-type: none"> <li>More than 40 cities globally are completely 'smart'</li> <li>Culture of multiple layered realities emerges</li> </ul>	<ul style="list-style-type: none"> <li>Living, shopping and driving is hugely automated, freeing time and enabling a sustainable lifestyle</li> </ul>	
Health		<ul style="list-style-type: none"> <li>A global dialogue about ethics in medicine emerges</li> </ul>		<ul style="list-style-type: none"> <li>Remote medical monitoring becomes obligation for risk patients</li> </ul>	<ul style="list-style-type: none"> <li>Robotic surgery is increasingly used in hospitals</li> <li>Health technology makes healthcare more affordable</li> </ul>		<ul style="list-style-type: none"> <li>Prosthetics and artificial memory can be used to enhance human abilities</li> <li>With radical drop in smoking, cancer rates are reduced significantly</li> </ul>	<ul style="list-style-type: none"> <li>New cures for HIV, cancer, genetic disorders</li> <li>All women in Africa with access to maternal healthcare</li> <li>UN Convention on ethics in medicine and cybernetics</li> </ul>	





# SOCIETY – “DEMISE” SCENARIO

Public services	<ul style="list-style-type: none"> <li>○ Deep cuts in public services in Western world in attempt to solve public debt crisis lead to unemployment and social conflicts</li> </ul>	<ul style="list-style-type: none"> <li>○ Infrastructure is nationalised in many countries to tackle the underinvestment problems</li> <li>○ Public service prices rise</li> </ul>	<ul style="list-style-type: none"> <li>○ Welfare systems start to collapse in Western world, whereas they are desperately needed in rest of the world</li> </ul>
Demographics	<ul style="list-style-type: none"> <li>○ High youth unemployment leads to social conflicts</li> <li>○ In Africa and Middle East, 'youth bulges' continue to exist and revolt for participation</li> </ul>	<ul style="list-style-type: none"> <li>○ Developing countries' economic growth stalls with rising population</li> <li>○ Urbanisation and poverty centres go hand in hand</li> <li>○ The unretirement phenomenon enters Western world and challenges younger generation's careers</li> </ul>	<ul style="list-style-type: none"> <li>○ The necessity of retirement ages in the West is questioned</li> <li>○ Top 25 cities account for 50% of world's wealth, social inequalities rise</li> <li>○ Prices rise and prevent positive outcomes of emerging middle class</li> <li>○ 1/3 of global population will be aged below 29.</li> </ul>
Smart living	<ul style="list-style-type: none"> <li>○ Digital communication is surveyed and analysed completely for business and government purposes</li> </ul>	<ul style="list-style-type: none"> <li>○ Digital labels and RFID chips determine nutrition and lifestyle choices</li> <li>○ Smart homes become reality, centrally managed in some countries</li> </ul>	<ul style="list-style-type: none"> <li>○ More than 40 cities globally are completely 'smart'</li> <li>○ Culture of multiple layered realities emerges</li> <li>○ Living, shopping and driving is hugely automated, with negative impacts on jobs in these sectors</li> </ul>
Health	<ul style="list-style-type: none"> <li>○ Physical augmentation is increasingly desirable</li> </ul>	<ul style="list-style-type: none"> <li>○ Robotics and other medical advances become available but cannot be funded in defunct healthcare systems</li> </ul>	<ul style="list-style-type: none"> <li>○ Cybernetics increasingly turns into a social experiment</li> <li>○ Welfare diseases spread strongly, cancer is main disease in the West</li> </ul>



**2013**      **2014**      **2015**      **2016**      **2017**      **2018**      **2019**      **2020**      **2021**

# SOCIETY – SUMMARY

## Introduction: educational trends

- Whereas demographics shape how societies interact with each other, technology changes individual lives.
- Until 2021, public services will struggle hard to deal with the provision of public goods. Individual lives can increasingly be automated and medicine forces us to rethink human identities.

## Trend 1: Public Services challenged

- Infrastructure continues to be a societal task but suffers from underinvestment. Alternative models of investment are increasingly considered, as well as cuts.
- Social welfare remains a public aspiration, but is challenging to finance. In the Western world, the system nears its collapse.

## Trend 2: New demographics

- Women take increasing influence in business, whereas the oldest generation continues to work.
- In many regions of the world, there is either an imbalance towards the young or the old generation. Societal conflicts need to be moderated accordingly.
- Urbanisation and the rise of the middle class change consumption patterns.

## Trend 3: Smart Living

- Technology advances rapidly and allows the automation of many day-to-day tasks. Houses could manage themselves, cars could drive themselves. Nutrition and consumption could be geared with smart appliances.
- The life of the entire society becomes subject to big data analysis – be this private communication or traffic flows in a smart city.

## Trend 4: Health & Medicine

- Medicine is close to several breakthroughs that will increase life expectancy and quality of life.
- They will also challenge existing norms of what society accepts to be normal or human. Physical and technical augmentation is possible and pushes the boundaries of 'human'

## Potential surprises

- Migration will affect society in ways that are difficult to predict, the same applies to changes in government structures.
- Societies might be more or less open to technological change and the uptake of technologies in less developed regions could be surprisingly quick or slow.

## Recommendations for projects

- New demographics and the challenged public services will leave gaps that civil society and entrepreneurship projects could address.
- Projects could focus on delivering or reflecting on the possibilities of smart living, or the medical advances.
- Fast technological developments will change the form of sustainable development projects.
- With changing demographics, the need for social projects will rise.
- Globalisation and technology will force society to re-think cultural identities, family values, communication habits and what we consider as human. Projects could make use of this need.
- Should the middle class grow globally, people will have more capacities to volunteer to improve their own welfare and societies' conditions.
- With the continuation of conflicts and the rise of inter-societal tensions due to demographic and technological changes, dialogue projects will be needed.

## Recommendations for educational projects

- Dialogue-based and awareness-raising projects on the future of humanity, family and cultural identities, communication and technology implications will be increasingly in demand.
- Educational projects on how to deal with information overload will be in demand.
- Changing demographics and empowerment of young people will require educational projects in political education and active citizenship.
- Health and healthy lifestyles will move into the focus of an ageing society. Educational or informational campaigns will rise in importance.
- Rising unemployment will require more vocational trainings



# SOCIETY – LINKLIST

Global Europe 2030-2050: Inventory of Forward Looking Studies with a focus beyond 2030 – [http://ec.europa.eu/research/social-sciences/pdf/fla-2030-2050-state-of-the-art-inventory\\_en.pdf](http://ec.europa.eu/research/social-sciences/pdf/fla-2030-2050-state-of-the-art-inventory_en.pdf)

Global Trends 2030: Alternative Worlds (by US NIC) – <http://globaltrends2030.files.wordpress.com/2012/11/global-trends-2030-november2012.pdf>

70 Jobs for 2030: Emerging Careers and How to Create Them – [http://www.thefutureofwork.net/assets/70\\_Jobs\\_for\\_2030.pdf](http://www.thefutureofwork.net/assets/70_Jobs_for_2030.pdf)

2030 is the new 2012 – <http://hplusmagazine.com/2012/12/12/2030-is-the-new-2012/>

China 2030 – Building a Modern, Harmonious, and Creative Society – <http://www.worldbank.org/content/dam/Worldbank/document/China-2030-complete.pdf>

Experts Forecast 2030 in the Wake of the Digital Revolution – [http://www.cost.eu/media/cost\\_stories/foresight\\_2030](http://www.cost.eu/media/cost_stories/foresight_2030)

Obesity and Severe Obesity Forecasts Through 2030 – [http://www.ajpmonline.org/article/S0749-3797\(12\)00146-8/abstract](http://www.ajpmonline.org/article/S0749-3797(12)00146-8/abstract)

20 predictions for the next 25 years – <http://www.theguardian.com/society/2011/jan/02/25-predictions-25-years>

Top Ten Predictions For 2030 – <http://kevinhoffberg.com/blog/2008/10/20/top-ten-predictions-for-2030/>

Energy Update: An Environmental Engineer's 2030 Forecast – <http://www.wfs.org/blogs/len-rosen/energy-update-environmental-engineers-2030-forecast>

Forecasts From The Futurist magazine – [http://www.wfs.org/Forecasts\\_From\\_The\\_Futurist\\_Magazine](http://www.wfs.org/Forecasts_From_The_Futurist_Magazine)

11 Predictions for 2030 That May Sound Outrageous Today but Will not in 2030 – <http://www.wfs.org/content/11-predictions-for-2030-may-sound-outrageous-today-will-not-2030>

OECD International Futures Programme – <http://www.oecd.org/futures/42551944.pdf>

Forecasting the Future of Cardiovascular Disease in the United States: A Policy Statement From the American Heart Association – <http://circ.ahajournals.org/content/early/2011/01/24/CIR.0b013e31820a55f5.abstract>

Trend Compendium 2030 – <http://www.rolandberger.com/gallery/trend-compendium/tc2030/content/assets/trendcompendium2030.pdf>

Foresight 2030: Benefitting from the Digital Revolution Workshop on Life Enhancement – [http://www.cost.eu/module/download/Foresight2030\\_LifeEnhancement\\_Report](http://www.cost.eu/module/download/Foresight2030_LifeEnhancement_Report)

Predictions: Humanity – <http://www.wfs.org/content/futurist/january-february-2012-vol-46-no-1/predictions-humanity>

Global burden of mental disorders and the need for a comprehensive, coordinated response from health and social sectors at the country level – [http://apps.who.int/gb/ebwha/pdf\\_files/EB130/B130\\_9-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/EB130/B130_9-en.pdf)

Biofuels in the European Union: A vision for 2030 and beyond – [ftp://ftp.cordis.europa.eu/pub/fp7/energy/docs/biofuels\\_vision\\_2030\\_en.pdf](ftp://ftp.cordis.europa.eu/pub/fp7/energy/docs/biofuels_vision_2030_en.pdf)

Foresight 2030: Living the Digital Revolution – [http://www.cost.eu/module/download/Foresight2030\\_Society\\_Report.pdf](http://www.cost.eu/module/download/Foresight2030_Society_Report.pdf)

Mobility scenarios toward a post-carbon society TRANSvisions Task – [http://ec.europa.eu/transport/themes/strategies/studies/doc/future\\_of\\_transport/2009\\_02\\_transvisions\\_task2.pdf](http://ec.europa.eu/transport/themes/strategies/studies/doc/future_of_transport/2009_02_transvisions_task2.pdf)

The Future Role of Civil Society – [http://www3.weforum.org/docs/WEF\\_FutureRoleCivilSociety\\_Report\\_2013.pdf](http://www3.weforum.org/docs/WEF_FutureRoleCivilSociety_Report_2013.pdf)

Envisioning Digital Europe 2030: Scenarios for ICT in Future Governance and Policy Modelling – <http://ftp.jrc.es/EURdoc/JRC61593.pdf>

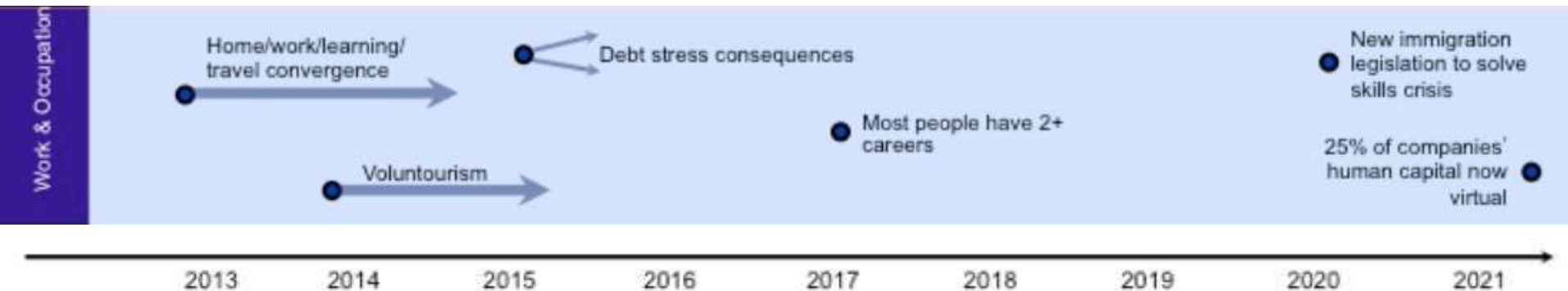
Global burden of mental disorders and the need for a comprehensive, coordinated response from health and social sectors at the country level – [http://www.iberi.jp/root/jp/31kankou/3115panphlet/pdf/scenario\\_eng.pdf](http://www.iberi.jp/root/jp/31kankou/3115panphlet/pdf/scenario_eng.pdf)

- Trends & technology Timeline 2010+”, Richard Watson, [www.nowandnext.com](http://www.nowandnext.com)
- Global Risks 2012. WEF
- Beyond the Baby Boomers – the rise of Generation Y, KPMG [http://us.kpmg.com/microsite/fslibrarydotcom/docs/Beyond%20the%20Baby%20Boomers%20-%20The%20Rise%20of%20Generation%20Y\\_GB&RC.pdf](http://us.kpmg.com/microsite/fslibrarydotcom/docs/Beyond%20the%20Baby%20Boomers%20-%20The%20Rise%20of%20Generation%20Y_GB&RC.pdf)
- How Demographic Trends Will Change the World Through 2050, RAND Corporation <http://www.rand.org/pubs/periodicals/rand-review/issues/2011/winter/world.html>
- American Census Data (global) <http://www.census.gov/population/international/data/idb/worldpop.php>
- Frost & Sullivan’s 50th Anniversary: 50 predictions for 50 <http://www.frost.com/prod/servlet/our-services-page.pag?mode=open&sid=218649156>
- Urbanisation and the Smart Society, Kjaer Global <http://global-influences.com/scientific/emergent-technologies/urbanisation-and-the-smart-society/>
- Ethics for a robotic age, BBC <http://news.bbc.co.uk/2/hi/technology/6425927.stm>



# WORK & OCCUPATION – EXECUTIVE SUMMARY

## Global Roadmap of Youth Initiatives 2012



- The baseline scenario developed for RYF 2013 builds on above illustration. It adds the differentiation between a baseline scenario, a 'honey and milk' scenario and a 'demise' scenario (for combined results, see summary on the right).
- **Main trend:** The future of work is smart, social, technology driven and global. Worklife will increasingly integrate new technologies. The worker of the future will be flexible, international and more in touch with social networks.
- **Project take-aways:** The Youth Time projects can deliver added value by offering trainings to close the skills gap for new technologies and a globalised, flexible work life. Bridging real and digital life will be a worthwhile avenue to explore.



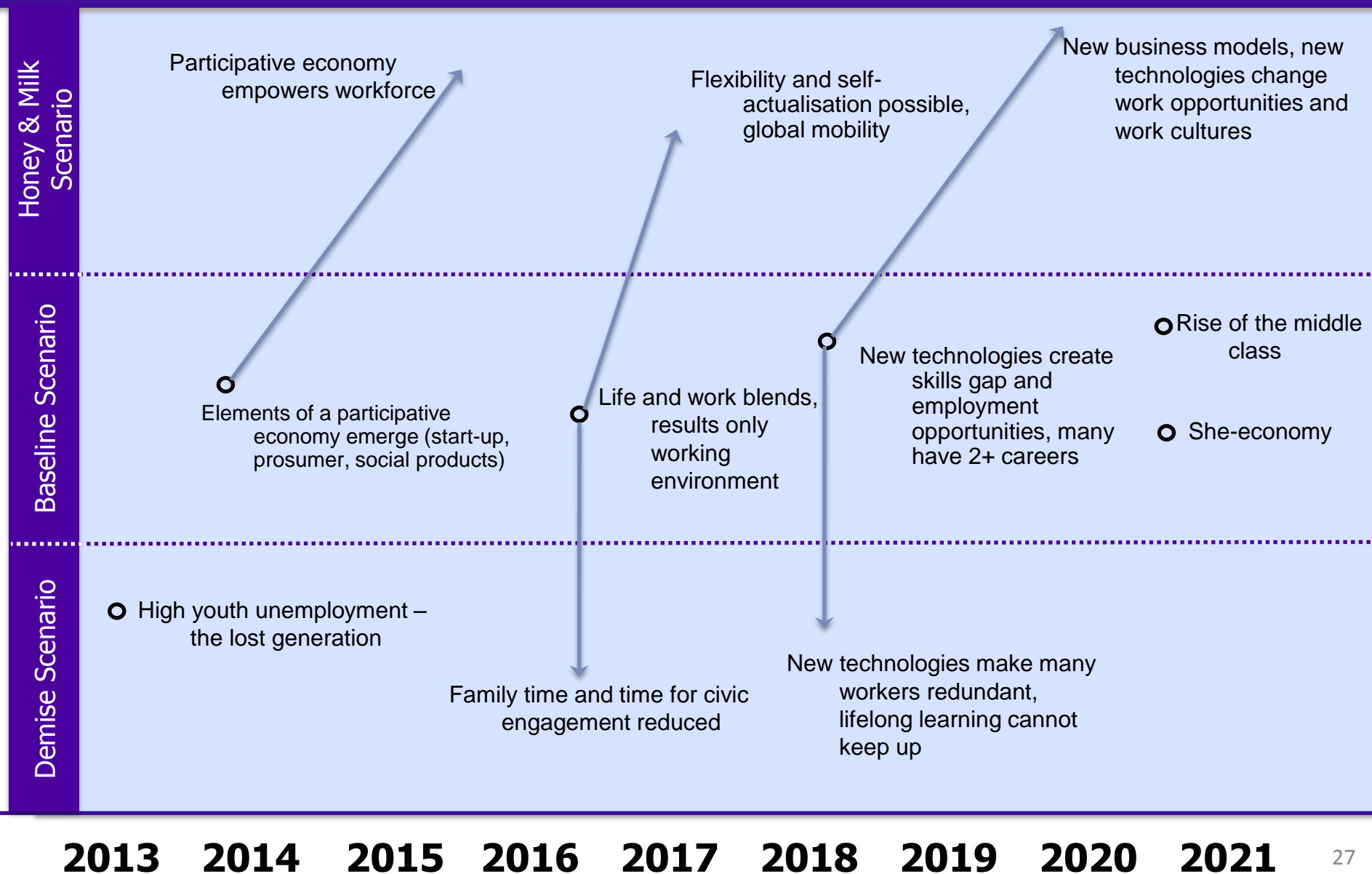
Global workforce

Work culture

Demographics

Technology

# WORK & OCCUPATION – SCENARIO SUMMARY



2013 2014 2015 2016 2017 2018 2019 2020 2021

# WORK & OCCUPATION – BASELINE SCENARIO

Global workforce  
Work culture  
Demographics  
Technology

- Shift in the centre of economic gravity to Asia and South America
- Intercultural Competence needed for global jobs
- Social Entrepreneurship and NGOs are increasingly important
- Young people account for 38% of global unemployment.
- Scarce resources impact increasingly business models
- Advanced materials (incl. nano) open new research avenues.
- Participative economy: consumers and business interact more closely.
- Robotics in manufacturing and surgeries require new skills

- More highly skilled workers with university degrees from BRICS, whereas a shortage of low-skilled workers occurs.
- Services and knowledge-intensive manufacturing to create lion share of new jobs.
- Blended life: work and life merge even closer.
- Self-actualisation, flexibility and work-life balance are increasingly expected
- Results-only work environments (ROWE), where employees are evaluated on performance and not presence become a trend again
- The second career becomes important
- Western Social Model in Crisis: Structural Reforms in all European countries
- The unretirement phenomenon enters Western world, 4 generations work together
- 3D printing changes design and enables localisation of manufacturing as opposed to outsourcing
- Electronic storage technologies change cost-benefit calculation for renewable energy
- Genomics and big data changes pharmaceutical and medical professions and create skills gaps

- Virtual Global Teams: most people work online and international. Social networks penetrate work.
- India and China each bring in a new billion to the global workforce.
- Silicon valley work conditions (flexibility, creative day) spread
- The importance of social networks increase at work.
- She-economy I: 870 million additional women gain employment globally.
- She-economy II: gender gap in earning narrows over the the decade, slowly approaching parity
- Electronic and near-autonomous cars start making a market impact.
- 50 billion to 1 trillion devices are connected to one another via internet (internet of things) – enabling new business models

- By 2030, India is projected to be the country with the most numerous working-age population (age 15 to 64). The 15-29 year old group in India will number around 370 million, and the 30-44 year old group around 343 million.
- China's workforce will remain stable in absolute numbers (ca. 970 million), but its share in the total Chinese population will decrease from 71.4 percent to 67 percent.
- The future lack of high- and medium skilled workers will be costly, drive unemployment and limit economic growth.

Gap between demand and supply of workers by educational attainment, 2020E  
Million workers

Legend: ● % of supply of skill cohort (blue), ● % of demand for skill cohort (red)

Category	Region	Total Shortage/Surplus	% of Demand
Shortages	High-skill workers	38-41	13
	Medium-skill workers	45	15
	Low-skill workers	89-94	10
Surpluses	High-skill workers	16-18	10
	Medium-skill workers	13	10
	Low-skill workers	32-35	11

Not only countries like Germany, but also countries like Russia will be hit hard by the lack of workers.

2013      2014      2015

2016      2017      2018

2019      2020      2021



# WORK & OCCUPATION – “HONEY & MILK” SCENARIO

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Global workforce			<ul style="list-style-type: none"> <li>Shift in the centre of economic gravity to Asia and South America</li> </ul>	<ul style="list-style-type: none"> <li>More highly skilled workers with university degrees from BRICS spurs creativity and innovation in new markets.</li> <li>International lingua franca is 100% English</li> <li>Silicon valleys emerge everywhere in the developing world</li> </ul>	<ul style="list-style-type: none"> <li>Non-western countries are producing much more innovative products than Western countries</li> <li>India and China each bring in a new billion to the global workforce – a new middle class.</li> </ul>				
Work culture	<ul style="list-style-type: none"> <li>Intercultural Competence needed for global jobs</li> <li>Social Entrepreneurship and NGOs activism as positive brand in a CV</li> </ul>			<ul style="list-style-type: none"> <li>Self-actualisation, flexibility and work-life balance are increasingly possible</li> </ul>		<ul style="list-style-type: none"> <li>Silicon valley work conditions (flexibility, creative day) available globally to all who want</li> <li>The importance of social networks increase at work and replace in parts existing hierarchies.</li> </ul>			
Demographics	<ul style="list-style-type: none"> <li>Young people account for 38% of global unemployment and find occupation increasingly as design/producer of their own idea – start up culture.</li> </ul>			<ul style="list-style-type: none"> <li>Western Social Model in Crisis: Structural Reforms in all European countries                             <ul style="list-style-type: none"> <li>The unretirement phenomenon enters Western world, 4 generations work together</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>She-economy I: 870 million additional women gain employment globally.</li> <li>She-economy II: gender gap in earning narrows over the the decade, slowly approaching parity</li> </ul>			
Technology	<ul style="list-style-type: none"> <li>Advanced materials (incl. nano) open new research avenues and job profiles.</li> <li>Robotics in manufacturing and surgeries lead to new educational paths</li> </ul>	<ul style="list-style-type: none"> <li>New fields of work through cybernetic devices like google glass.</li> </ul>		<ul style="list-style-type: none"> <li>Do-it-yourself through 3D printing – the prosumer emerges</li> </ul>	<ul style="list-style-type: none"> <li>Super clean production models emerge</li> <li>Genomics and big data changes pharmaceutical and medical professions and create new jobs</li> </ul>	<ul style="list-style-type: none"> <li>Education for new unseen technologies of increased importance.</li> <li>Green companies starting to dominate the marketplace</li> </ul>	<ul style="list-style-type: none"> <li>50 billion to 1 trillion devices are connected to one another via internet (internet of things) – enabling new business models and creating jobs</li> </ul>		





# WORK & OCCUPATION – “DEMISE” SCENARIO

Global workforce	<ul style="list-style-type: none"> <li>Shift in the centre of economic gravity to Asia and South America accompanied by low-quality jobs and outsourcing</li> <li>Trafficking and labour exploitation</li> </ul>	<ul style="list-style-type: none"> <li>Deindustrialisation leads to huge parts of the workforce being wrongly qualified for new worklife</li> </ul>	<ul style="list-style-type: none"> <li>Lack of specialists – skills gap</li> <li>India and China each bring in a new billion to the global workforce while the quality of their education lags behind.</li> </ul>
Work culture	<ul style="list-style-type: none"> <li>Social Entrepreneurship and NGOs fail to bring a change in the work culture</li> </ul>	<ul style="list-style-type: none"> <li>Flexibility and increasing number of self-employed and freelance jobs</li> <li>Specialisation trend continues to be important but some skills gaps are overlooked</li> <li>Many elder worker fail to find job satisfaction in jobs they are doing for a long time.</li> <li>Results-only working culture reduces family time and increases divorce rates</li> </ul>	<ul style="list-style-type: none"> <li>Obesity and injuries at the work place increase, as well as psycho-social stress</li> </ul>
Demographics	<ul style="list-style-type: none"> <li>Young people account for 38% of global unemployment – a lost generation.</li> </ul>	<ul style="list-style-type: none"> <li>Necessity for workforce import in the West leads to brain drain in Asia, Africa, Latin America</li> <li>The unretirement phenomenon enters Western world, young generations hit the 'gray hair ceiling' in their careers</li> <li>Those that can afford retirement, do – social tensions ensue.</li> </ul>	<ul style="list-style-type: none"> <li>She-economy I: 870 million additional women gain employment globally – cheap workforce in the absence of salary parity</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Quick innovation cycles are costly and crowd many companies out of their markets</li> <li>Intellectual robbery an increasing phenomenon</li> <li>Robotics in healthcare increases possibilities but also general costs of healthcare systems</li> </ul>	<ul style="list-style-type: none"> <li>3D printing leads to a new wave of unemployment</li> <li>Renewable energy movement fails, return to fossil energy</li> <li>Genomics and big data changes pharmaceutical and medical professions and create skills gaps</li> </ul>	<ul style="list-style-type: none"> <li>Near-autonomous cars start making an impact on transport sector and associated jobs</li> <li>50 billion to 1 trillion devices are connected to one another via internet (internet of things) – challenging old business models</li> </ul>



2013	2014	2015	2016	2017	2018	2019	2020	2021
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# WORK & OCCUPATION – SUMMARY

## Introduction: work & occupation trends

- The next decade will, in a business-as-usual scenario, see the beginning of a new era of work in terms of technology and globalised workforce.
- The future of work and occupation is increasingly smart, social and global.
- Rising wealth, education and workforce in the developing countries will result in an ever-globalized working world. The rise of the developing world comes simultaneously with a structural/demographic crisis in Europe.

## Trend 1: Global Workforce

- Lack of up to 40 million high-skill and nearly 45 million medium-skill workers globally by 2020, with a potential surplus of up to 95 million low-skill workers.
- Virtual Global Teams: trans-nationalization of work due to the future flexibility of borders for qualified professionals and specially the inclinations towards virtual human workforce (internet based jobs). English persists as a lingua franca in a globally connected workforce.

## Trend 2: Work Culture

- Start-up culture, social entrepreneurship and NGO work are increasingly considered as career plus.
- Google/McKinsey effect: most global players offer flexible and international development opportunities.
- Self-actualization, flexibility, work-life integration, and a workplace that integrates social networks increasingly become worker's expectations. Work and life blend into each other.

## Trend 3: Demographics

- Rising population in Asia, Africa and Latin America meets ageing population in the West. A shift in the centre of economic gravity to Asia and South America is immanent and is accompanied by a shift in the configuration of the global working population.
- The Western social welfare model is in question and needs structural reforms.
- Women play an increasing role in the economy (also as leaders), work-life balance continues to be re-negotiated

## Trend 4: Technology

- Key enabling technologies (nano technology, biotech, rapid prototyping (3D printer), additive manufacturing move the boundaries of the technologically possible.
- A Third Industrial Revolution becomes possible, including mainstream electronic cars and a green economy.
- The internet of things and the rise of smartphones changes production processes (mass customisation) and advertising.

## Potential surprises

- Structural financial sector problems remain endemic. In Europe, China and the US, future financial stability will depend greatly on the capacity of its political leaders to avoid economic fragmentation and find long-term solutions without creating huge unemployment.
- Technology breakthroughs may change working life drastically.
- New economic models like the sharing economy or social entrepreneurship may change capitalistic structures.

## Recommendations for projects

- Projects can take advantage of the rapid changes in the area of demographics and technology and cater to new emerging markets.
- In terms of global workforce and work culture, projects delivering on the new skill set will be in demand
- Widen/diversify the structure of organisations (more international) to meet the demographic and economic shifts and ensure productivity
- Create more flexible working and service hours to meet the changes in working culture and the needs of clients
- Continue using new technologies like online broadcasting because they will be more widely available.
- Use 3D printing for certain projects
- Create real-life experiences as a counterpart to the virtual world
- Develop opportunities to combine work and civic engagement, as work and life is merging, too.
- Develop projects that integrate or deal with the emerging technologies
- Offer projects that bring real-life experiences and cultural diversity to the workplace.

## Recommendations for educational projects

- New technologies require new skills. Educational projects could prepare society and in particular youth for the new skill set for the future.
- Work-life balance will increasingly be a global question, projects can offer training or information in this field.
- Language courses will continue to be in high demand, so will the need for a workforce that is well-trained to interact in global teams.
- Leadership trainings for women might be interesting to explore as projects for the she-economy.
- Education for start-up entrepreneurs could fill a gap in a world of young unemployed people.
- Vocational skills will be needed to complement the knowledge available in traditional education.

Global  
workforce

Work culture

Demographics

Technology

# WORK & OCCUPATION – LINKLIST

- The World at Work, McKinsey Global Institute [http://www.mckinsey.com/insights/employment\\_and\\_growth/the\\_world\\_at\\_work](http://www.mckinsey.com/insights/employment_and_growth/the_world_at_work)
- Disruptive technologies: Advances that will transform life, business, and the global economy, McKinsey Global Institute, [http://www.mckinsey.com/insights/business\\_technology/disruptive\\_technologies](http://www.mckinsey.com/insights/business_technology/disruptive_technologies)
- Big data: The next frontier for innovation, competition, and productivity, McKinsey Global Institute, [http://www.mckinsey.com/insights/business\\_technology/big\\_data\\_the\\_next\\_frontier\\_for\\_innovation](http://www.mckinsey.com/insights/business_technology/big_data_the_next_frontier_for_innovation)
- The social economy: Unlocking value and productivity through social technologies, McKinsey Global Institute, [http://www.mckinsey.com/insights/high\\_tech\\_telecoms\\_internet/the\\_social\\_economy](http://www.mckinsey.com/insights/high_tech_telecoms_internet/the_social_economy)
- Booz & Co: The Third Billion [http://www.booz.com/global/home/what-we-think/third\\_billion](http://www.booz.com/global/home/what-we-think/third_billion)
- *European Strategy and Policy Analysis System (ESPAS) Global trends 2030 – Citizens in an interconnected and polycentric world* ; ISBN 978-92-9198-199-1
- Mckinsey Demographics Russia Germany, not published
- OECD. *Secretary-General's Report to Ministers 2012*, OECD Publishing, 2012.
- Schinas, Margaritis. "The EU in 2030: a Long-Term View of Europe in a Changing World: Keeping the Values, Changing the Attitudes." *European View* 11, no. 2: 267–275. doi:10.1007/s12290-012-0229-z.
- Schmidt, Eric, and Jared Cohen. *The New Digital Age: Reshaping the Future of People, Nations and Business*, Alfred a Knopf Incorporated, 2013.
- Castells, Manuel. *The Network Society*, Edward Elgar Pub, 2004.
- Moody, Bradfield and Nogrady. *The Sixth Wave – How to Succeed in a Resource Limited World*
- Machine to Machine Communications. *Connecting Billion Devices*, OECD [http://www.oecd-ilibrary.org/science-and-technology/machine-to-machine-communications\\_5k9gsh2gp043-en](http://www.oecd-ilibrary.org/science-and-technology/machine-to-machine-communications_5k9gsh2gp043-en)
- Trends in Manufacturing to 2020, Future Manufacturing Industry Innovation Council (Australia) <http://www.innovation.gov.au/industry/futuremanufacturing/FMIIC/Pages/Library%20Card/TrendsinManufacturingto2020.aspx>
- Baby boomers gray but don't slow down – the unretirement phenomenon [http://http-download.intuit.com/http.intuit/CMO/intuit/futureofsmallbusiness/intuit\\_2020\\_report.pdf](http://http-download.intuit.com/http.intuit/CMO/intuit/futureofsmallbusiness/intuit_2020_report.pdf)
- The 2020 Work place: are you ready? <http://www.confidentfuture.com.au/blog/the-2020-workplace-are-you-ready/>
- What will work look like in 2020? <http://www.timewisejobs.co.uk/article/what-will-work-look-like-in-2020/>
- Global Vision 2020+, Kjaer Global <http://global-influences.com/social/worklife-balance/global-vision-2020/>
- Transitioning to Workforce 2020 – Anticipating and managing the changes that will radically transform working life in the coming decade. White Paper, Cisco <http://tinyurl.com/nf4lto4>

## PICTURE - SOURCES

- Slide 1 (Cover Page): <http://s3.favim.com/orig/40/blackampwhite-cool-jump-people-photography-Favim.com-331193.jpg>
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# CONCLUSION

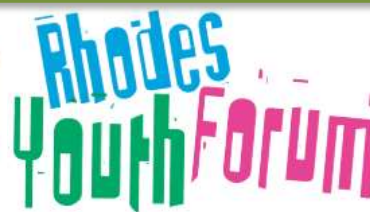
# GLOBAL ROADMAP OF YOUTH INITIATIVES 2021

- “Change is the law of life. And those who look only to the past or the present are certain to miss the future” (J.F. Kennedy)
- Youth Time is a movement that gathers young leaders united in a global effort to shape a better world. At the Rhodes Youth Forum 2013, 100 of these leaders came together to reflect on the future and how their own projects will be affected by it.
- They developed three scenarios for a total of five spheres of life and drew conclusions from these. Other than in the 2012 report, which looked at one scenario for each of the spheres, the 2013 report plays with the idea of several possible futures.
- In addition to the 2012 report, the 2013 report gives specific recommendations for projects. It also has a special focus on education and how educational projects will need to adapt to the future.
- The Global Roadmap of Youth Initiatives 2021 (Focus on the Future of Education) shall serve as an input to the ongoing work of Youth Time on the New Paradigm of Education.
- We thank all our sponsors for having made this work possible.

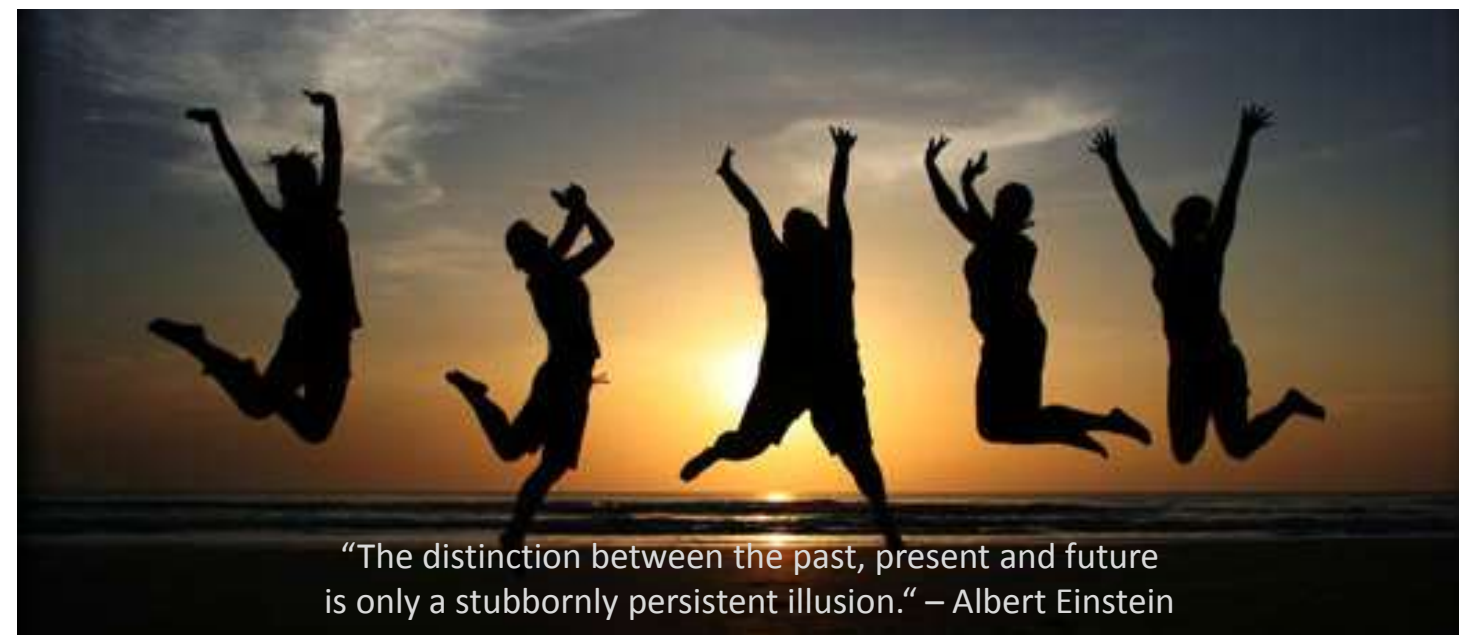


EDUCATION	Digital Learning	Lifelong Learning	Free Agent Learner	Borderless Learning
FAMILY & HOME	Family culture	Family processes	Socio-economics	Family Structure
INTERNET & MEDIA	Digital Society	Internet business	Governance	Mobile co-creation
SOCIETY	Health	Smart living	Demographics	Public services
WORK & OCCUPATION	Technology	Demographics	Work culture	Global workforce

Summary of Trends: Focus Report on Future of Education



## Focus Report ‘The Future of Education’



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