CITY OF COPPELL, TEXAS

PROPOSAL to CONDUCT ADVANCED SCENARIO PLANNING – SUPPORTING SMART CITIES BOARD

AUGUST 21, 2020

COPPELL SMART CITIES ADVANCED SCENARIO ANALYSIS

Submitted by:
Future iQ, Inc.
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August 21, 2020

ATTN – City of Coppell

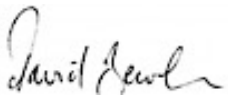
- Traci E. Leach - Deputy City Manager
- Vicki Chiavetta - Deputy City Manager
- Jerod Anderson - Chief Information Officer

Proposal – Advanced Scenario Development – Smart Board

Dear Traci, Vicki and Jerod,

Please find attached our proposal for the work we discussed. In terms of budget, timeline and scope of work – I have made a number of assumptions and am happy to revise as required.

Yours sincerely,



David Beurle
CEO, Future iQ, Inc.
Email: david@future-iq.com
Tel: +1 612 757 9190

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1.0 Understanding of the Scope of Work

Based on briefing email and discussion, our undertaking of the scope of work is as follows:

- To work with the Smart Board and key staff to advance their research and deliberations.
- The Smart Board was created to help Coppell envision what the city needs to be considering from a technology perspective for the next 20 years.
- This is broader than Pillar 7 on Sustainability and focuses on the impact of technology across all of the pillars, not just sustainability.
- The Board is keen to engage with Future iQ to help walk them through some advanced scenario planning that builds on previous efforts, and which would help springboard towards planning and implementation.

In terms of the approach, it seems there are several significant knowledge gaps that can be filled with some advanced scenario development. These include:

- Portfolio of technologies – what are the main technologies (or groups of technologies) that will be shaping cities in the future.
- Impact of technologies – exploring what is likely to be the impact of core groups of technologies on key topic areas - at the minimum these will include Transport, Housing, Resource Management, Data Collection, Education and future of work.
- Trajectory and Velocity of change – understanding what variable scenarios for a city like Coppell are, and how fast change is likely to occur.
- Leading Edge vs. Bleeding Edge – how does Coppell position itself to be a leading adapter, but not embracing technologies that become redundant or irrelevant. Exploring the appetite for change and investment levels, or even various business models that fund technological adoption.

The proposal, as outlined in the following sections aims to take a realistic approach to advanced scenario development, suitable for the context of Coppell and the appetite for change in the community.

2.0 Approach

The approach we are proposing has three major sections:

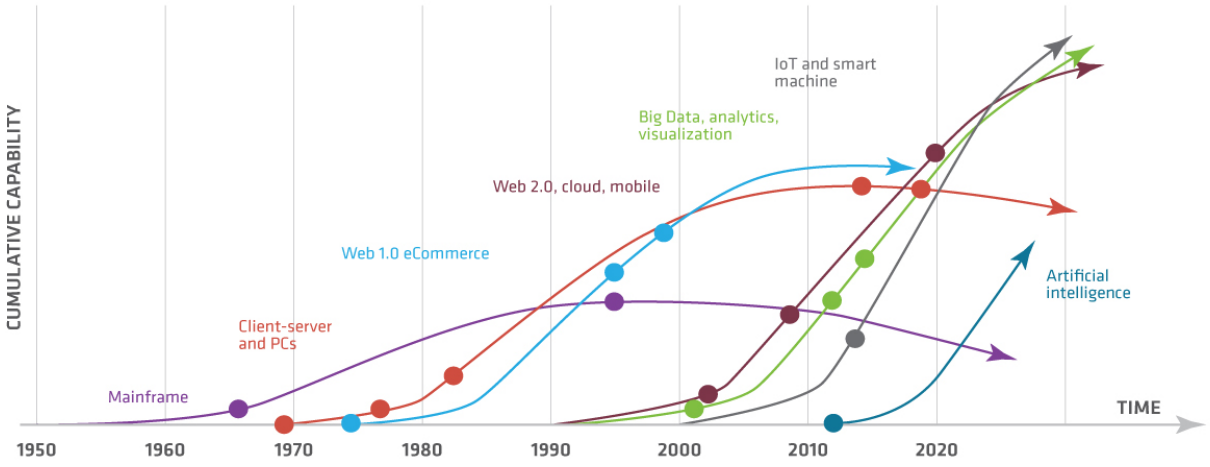
- Conduct a scan and compilation of emerging city based / relevant trends and expected adoption curves. We are proposing a 2000 to 2020 analysis, to create a context.
- Formulation and implications analysis of a range of trajectories (advanced scenarios), within a plausible 'width' - for a city like Coppell (mid-sized, in leading 10%).
- Develop recommendations for sequence, timing and scale of smart technologies for Coppell.

The methodological approach would be a a mixture of desktop of:

- Foresight research
- Virtual task force sessions with Board and others (It is assumed all sessions will be run in a virtual format)
- Likely some survey work (and drawing from Vision data)
- Produce a final report

2.1 Phase 1: Trend research and adoption curves

This Phase is a 'desk-top study' based on foresight research that will examine trends reshaping cities. This will draw from contemporary research, experts and published material. The analysis will lay out trends in a manner similar to the following diagram. This will include historical adoption and forecast adaption.



The Increasing Capability of Digital Technologies

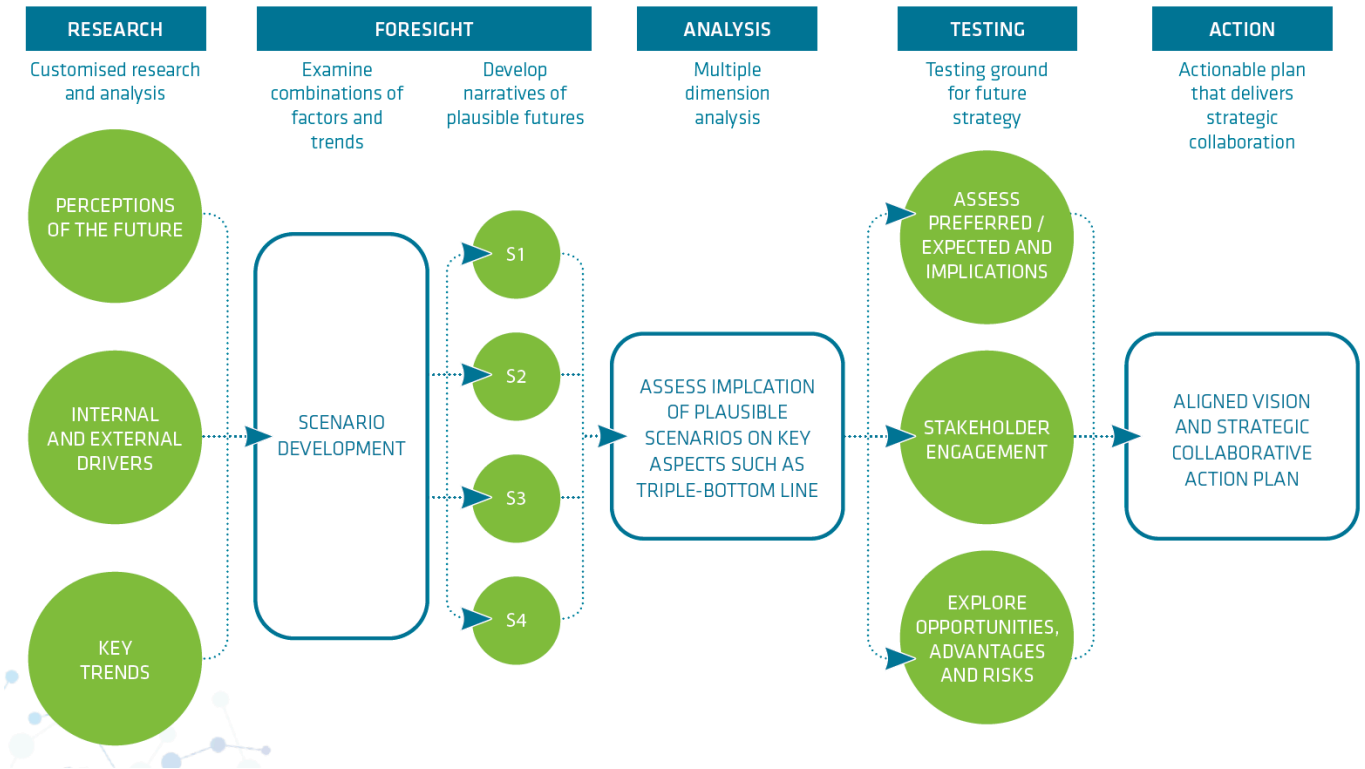
Source: Transformation Initiative Mining and Metals Industry, White Paper, World Economic Forum/Accenture Analysis, January 2017.

Work in Phase 1 includes:

Phase 1: Trend research and adoption curves	Initial planning and project schedule
	Virtual meeting with Board and staff
	Trend research on technology and impacts 2000 to 2040
	Develop adoption curve charts and create overlay of Coppell aspirations.

2.2 Phase 2: Exploring Future Scenarios and Implications

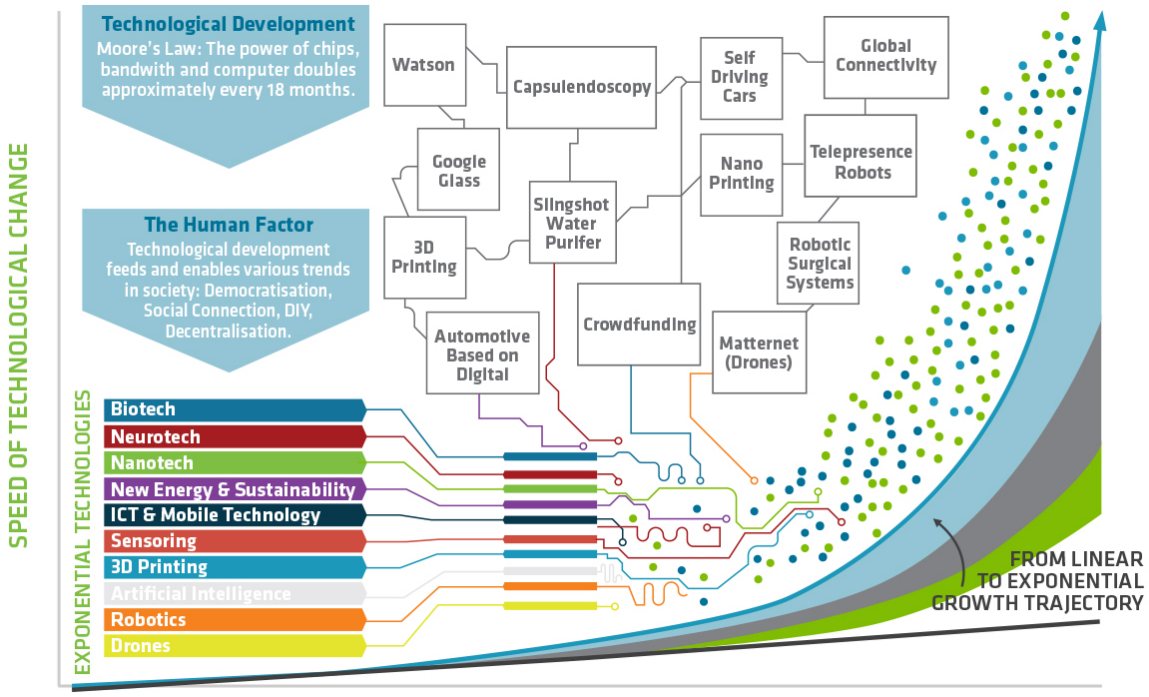
The Advanced Scenario development will drill into a range of plausible scenarios for technological development and adoption, and what would be the attendant implications and consequences. This work would be based on the Future iQ scenario planning methodology and would be a participatory process with the Board and other key stakeholders.



Exploring the interrelationship of technologies

A key aspect of the advanced scenario development will be understanding how technologies might combine to accelerate change. We will attempt to create scenarios that explore differing versions of technology combinations. This would build on the work we are doing with Industry 4.0 technologies in the defense manufacturing sectors.

Example map of interrelations of technologies that accelerate speed of change



Source: Deloitte. 2014. Industry 4.0 Challenges and solutions for the digital transformation and use of exponential technologies.

Work in Phase 2 includes:

Phase 2: Exploring Future Scenarios and implications	Develop range of potential trajectories (advanced scenarios) – with Board input
	Explore interrelationship of technologies
	Implications analysis workshop session with Board to explore velocity and probability of each scenario

2.3 Phase 3: Coppell Implementation Plan

The final step would be working with the Board to develop a 'roadmap' that lays out an optimal pathway for Coppell to invest in and apply emerging technologies across the cityscape. This process would transition from the technical foresight and advanced scenario work, to the implementation and sequence recommendations.

Phase 3:	Recommendation development for sequence, timing and scale of smart technologies for Coppell.
	Create roadmap, with Board and Staff input
	Final report

3.0 Proposed Schedule

Key Phases	Key Deliverables/Benchmarks	S	O	N	D	J	F
Phase 1: Trend research and adoption curves	Initial planning and project schedule						
	Virtual meeting with Board and staff						
	Trend research on technology and impacts 2000 to 2040						
	Develop adoption curve charts and create overlay of Coppell aspirations.						
Phase 2: Exploring Future Scenarios and implications	Develop range of potential trajectories (advanced scenarios) – with Board input						
	Explore interrelationship of technologies						
	Implications analysis workshop session with Board to explore velocity and probability of each scenario						
Phase 3: Coppell Implementation Plan	Recommendation development for sequence, timing and scale of smart technologies for Coppell						
	Create roadmap, with Board and Staff input						
	Final report						

4.0 Proposed Budget

Key Phases	Key Components	Proposed Fees per Phase
Phase 1: Trend research and adoption curves	• Initial planning and project schedule • Virtual meeting with Board and staff • Trend research on technology and impacts 2000 to 2040 • Develop adoption curve charts and create overlay of Coppell aspirations.	$5,000
Phase 2: Exploring Future Scenarios and implications	• Develop range of potential trajectories (advanced scenarios) – with Board input • Explore interrelationship of technologies • Implications analysis workshop session with Board to explore velocity and probability of each scenario	$10,000
Phase 3: Coppell Implementation Plan	• Recommendation development for sequence, timing and scale of smart technologies for Coppell. • Create roadmap, with input from Board and Staff input • Final report	$5,000
TOTAL	**FIXED PRICE PROPOSAL**	**$20,000**

Proposed payment schedule:

- 50% on signing contract
- 50% at completion

5.0 Proposed Future iQ Project Team

The Future iQ team members presented in this proposal have significant experience working on advanced scenario planning and urban futures projects. The proposed team members are an experienced and reliable team, with a complementary mix of required skills in:

- Highly developed critical thinking capacity in the areas of scenario and strategic planning, and foresight research
- Knowledge and experience with municipalities, corporations, regional entities and non-profit organizations
- Detailed practical experience in research, key stakeholder, and data visualization

All team will be directly accountable to Project Director David Beurle, CEO, Future iQ. Below are the respective roles of team member for this project:

Future iQ Team

Team Member	Title	Role
David Beurle	CEO, Future iQ, Inc.	Project Director, Facilitation, Project Development
Heather Branigin	VP, Foresight Research	Foresight trend Research, Strategy Development
Johanna Hoffman	Sr. Foresight and Planning Specialist, Future iQ	Urban Impact and Planning, Future Scenario formulation
Walter Paixao-Cortes	Data Engineer	Data Analysis and Visualization
Tobiloba Adaramati	Data Analyst	Data Analysis

5.1 Project Director, David Beurle, CEO, Future iQ

RÉSUMÉ

DAVID BEURLE

david@future-iq.com

EDUCATION

Bachelor Degree in Agricultural Science, University of Sydney, 1984

EMPLOYMENT

Founder and CEO Future iQ, USA and Europe, 2003 – Present

Principal Adviser, Minister for Primary Industries, Western Australia, 1991 – 2000

Rangeland Scientist, Western Australian Department of Agriculture, 1985-1991

PHILANTHROPIC WORK

Board Director, Western Australian Community Foundation, 2003-2005

Founding member, Plant-Based Product Council, USA, 2019

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DAVID BEURLE, *B.SC. AGR*

C.E.O. FUTURE IQ

As founder and CEO of Future iQ, David is an expert in creating future planning approaches for use in regional, industry and organizational settings. He has pioneered the application of scenario planning with regions, regional industries and corporations around the world. David created the Future Game, a widely used planning and workshop tool that has been used in over 500 workshops across 10 countries. As CEO of Future iQ, David has led global projects across 4 continents and has written and contributed to a number of foresight papers. Having worked in the field of organizational and regional economic and community planning for over 20 years, his work has won numerous awards. David has a major role in Future iQ' projects as lead consultant and director of projects.

RECENT PROJECT EXPERIENCE

- New England Regional Defense Industry Collaboration, New England, 2019
- Park City Community Vision and Strategic Action Plan, UT, 2019
- Clearwater Economic Development Association, ID, 2019
- City of Mitchell Community Vision and Action Plan, SD, 2019
- ECC Medical/Well-Being Strategic Marketing Plan and Economic Development Plan, MN, 2016-2019
- Tillamook County Strategic Vision and Action Plan, Oregan, 2018-2019
- National Association of Development Organizations, Washington, D.C., 2018-2019
- Future of Urban Living Think Tank, St Georges House, Windsor Castle, UK, 2018-2019
- Middle Georgia Regional Defense Industry Economic Diversification Project 2017 - 2018
- City of Coppell, Texas, Community Visioning 2018 - 2019
- Snohomish County, Washington, Tourism Implementation Plan 2017 - 2018
- Maine Woods, Tourism Impact Study 2017 - 2018
- City of San Diego Defense Industry Economic Development Plan, California, US, 2016 - 2018
- North Coast, Oregon, Tourism Destination Management, 2018 - 2019
- Hilton Head Island, South Carolina, Community Visioning project, 2016 - 2017
- Task Force LIMA Defense Initiative, Ohio, US, 2015 - 2017
- National Congress of American Indians, Future Game development, 2016 - 2018
- City of Wayzata, Minnesota, US, Community Visioning 2017 - 2018
- Moosehead Lake Regional Master Plan, Maine, US, 2016 - 2017
- Edina Economic Development Plan, Minnesota, US, 2016
- Oregon Regional Tourism Planning US, 2015 - 2016
- Columbia River Gorge, Oregon, US, 2015 - 2016
- Griffith Foods Scenario Planning Chicago, US, 2016
- Mediterranean PORTS EU Projects Italy/France, 2015
- Fox Valley Defense Industry Adjustment, Wisconsin, US, 2014 - 2015
- Texarkana Defense Project, Texas, US, 2015
- Vision Edina, Minneapolis, US, 2014 - 2015
- Australian Grain Research and Development Corporation, Western Australia, 2008 - 2015
- Vadinia Project, Leon, Northern Spain, 2014
- Agriparco Montespertoli, Tuscany, Italy, 2014
- Govt. of Alberta Small Business Strategy, Canada, 2013
- Steering it Forward North East Nevada, US, 2013
- Mount Pierre Project, Australia, 2013
- Kewaunee Economic Adjustment Project, Wisconsin, US, 2013
- Global Think Tank, Windsor Castle, UK, 2012
- Future West Cork, Ireland, 2009 - 2012
- Palliser Futures Project, Alberta, Canada, 2009
- Winnemucca Futures Project Nevada, US, 2009

RECENT PUBLICATIONS

- The Future of Urban Living, 2019
- Future of Tourism, 2018
- The Next Industrial Revolution, 2018
- The Future of Midwest Agriculture, 2017 - 2018
- The Future of Manufacturing, 2016
- The Future of Food, 2016
- Economics of Collaboration, 2015
- Cities of the Future, 2015
- Building Sustainable Regional Communities, Windsor Castle, UK, 2012
- The Futures Game: A Scenario game Workshop Package to Engage Future Thinking, 2009
- Development of a Process to Turn Plausible Scenarios into On-Ground Action, 2009

5.2 Heather Branigin, Vice-President, Foresight Research

RÉSUMÉ

EDUCATION

Master of Arts in Teaching
Secondary Level, Social Studies
University of St. Thomas, MN

Bachelor of Arts in Political Science/ International Relations
Advanced Language Certificate: French Literature
Carleton College, MN

Honours Degree, Neuchâtel Jr. College
Neuchâtel, Switzerland

EMPLOYMENT

Vice President, Foresight Research, Future iQ, 2016-present

City of Edina, MN, 2013-2016

NCCA - National Model United Nations
Minneapolis, MN, 2010-2013

UNA-MN, St. Paul, MN, 2007-2010

PHILANTHROPIC WORK

Bd. Member, Caring for Cats, present

Vol Judge, Future City Comp., 2017

Adv. Council Member, UNA-MN 2014-present

Co-President (2011-2013), Bd. Member (2010, 2014) UNA-MN

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HEATHER BRANIGIN, *B.A., M.A.T.*

VICE PRESIDENT, FORESIGHT RESEARCH

Heather began work with Future iQ in 2015 as primary researcher and author of Future iQ's foresight publication The Future of Food, and recently co-authored The Future of Urban Living and The Next Industrial Revolution. She has extensive experience in local government and the nonprofit sector, and is an accomplished project manager and research analyst. Heather has a well-developed ability to assimilate information into thoughtful and coherent writing. She applies the integration of future trends, data analysis and public engagement into implementable strategy development for clients. Through her work, Heather seeks to provide that critical resourceful guidance needed to empower communities and organizations to make decisions that build sustainability and resiliency as they face a future of accelerations and change. Originally from Canada, Heather has pursued her international interests through her philanthropic work with the United Nations Association of Minnesota.

RECENT PROJECT EXPERIENCE

- Kinship Fellows and Food:Land:Opportunity Grantees Summit, Chicago, IL, 2019-Present
- City of Trotwood Organizational Strategic Plan, OH, 2019-Present
- New North Business Intelligence Strategic Action Plan, WI (2019)
- New England Collaborative, DoD-OEA (2019)
- City of Mitchell Community Vision and Action Plan, SD, 2019-Present
- Future of Urban Living Global Consultation at Windsor Castle, UK, 2018
- CEDA, ID, 2019
- Sustainable Materials Management - Vision for Iowa, Iowa DNR, 2018-Present
- Tillamook County Strategic Vision and Action Plan, OR, 2018-2019
- ECC Medical/Well-Being Strategic Marketing Plan and Econ Dev Plan, MN, 2016-2019
- NADO, Washington, D.C., 2018-2019
- Coppell Vision 2040, Coppell, TX, 2018-2019
- City of San Diego, OEA Grant Facilitation, San Diego, CA, 2016-2019
- Snohomish County Regional Tourism Destination Development, WA, 2018
- McHenry County College, Crystal Lake, IL, 2018
- Rural Community Assistance Partnership, Washington, D.C., 2018
- Wayzata Community Vision, MN, 2017-2018
- NHADEC, NH, 2017-2018
- Waseca Vision 2030, MN, 2017-2018
- Edina Nodes and Modes Bridging Sessions, Edina, MN 2017
- Scott County Visioning and Scenario Planning, MN, 2017
- CAP-HC Vision and Strategic Action Plan, St. Louis Park, MN 2017
- Task Force LIMA Defense Initiative, Allen County, OH, 2016-2017
- University of Minnesota, Future of Midwest Agriculture, MN, 2016-2017
- Town of Hilton Head Island Vision and Strategic Action Plan, SC, 2016-2017
- City of Edina, Vision Edina, MN, 2014-2015

RELEVANT PUBLICATIONS

- IDNR Strategic Vision for Iowa, 2019
- Trotwood Think-Tank Report, 2019
- New England Collaborative Think-Tank Report, 2019
- NADO Strategic Action Plan, 2019
- Edina Med/Wellbeing Dest Marketing Strategic Plan, 2019
- CEDA Think-Tank Report, 2019
- Tillamook Co Think-Tank Report 2019
- The Future of Urban Living, 2019
- Coppell Vision 2040 Strategic Action Plan, 2019
- The Future of Tourism, 2018
- McHenry Co Coll Strategic Foresight Session, 2018
- The Next Industrial Revolution, 2018
- Waseca Vision 2030 Strategic Action Plan, 2018
- NHADEC Strategic Action Plan, 2018
- Snohomish Co Tourism Industry Reports, 2018
- Scott County Planning Reports, 2017
- Propel San Diego Think-Tank Report, 2017
- Edina Chamber Econ Dev Strategy, 2017
- Innovation Framework for Greater Lima Region, 2016
- The Future of Food, 2016

HEATHER BRANIGIN

heather@future-iq.com

5.3 Johanna Hoffman, Sr. Foresight and Planning Specialist, Future iQ

RÉSUMÉ

EDUCATION

MLA Landscape Architecture & Environmental Planning, University of California, Berkeley, CA

BA Creative Writing and Environmental Studies, Oberlin, Oberlin, OH

EMPLOYMENT

Senior Project Manager and Design Specialist, MKThink, San Francisco, CA, 2018 - Present

Founder & Lead Designer, Shiftworks, Berkeley, CA, 2016 - 2019

Resilient Design Associate, Urban Fabrick, San Francisco, CA, 2016 - 2017

Coastal Sustainability Studio Fellow, Louisiana State University, Baton Rouge, LA, 2016

Designer & Researcher, The Open Workshop, San Francisco, CA, 2015

Landscape Designer, Terrain Studio, San Francisco, CA, 2014

Co-Editor and Director, GroundUp Journal, UC Berkeley, 2012 - 2013

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JOHANNA HOFFMAN, *M.L.A, B.A*

SENIOR FORESIGHT AND PLANNING SPECIALIST

Johanna Hoffman is an award-winning urban designer, foresight practitioner and strategic planner focused on helping cities, communities and organisations create more adaptive futures. She holds a Masters degree in Landscape Architecture and Environmental Planning and a Bachelor's degree in Environmental Science and Creative Writing. She uses her 10+ years of experience to help clients navigate dynamic change through comprehensive plans and interactive engagement strategies. Data visualisation, strategy, qualitative and quantitative research all form important aspects of her work. She has lectured and presented at institutions from University California Berkeley and the Yerba Buena Center for the Arts to the Rhode Island School of Design and the Massachusetts Institute of Technology. Recent clients include the University of Hawaii, the Oakland Unified Planning District and the San Francisco International Airport.

RECENT PROJECT EXPERIENCE

- Senior Project Manager and Design Specialist, MKThink, San Francisco, CA, 2018 - Present
- Founder & Lead Designer, Shiftworks, Berkeley, CA, 2016 - 2019
- Resilient Design Associate, Urban Fabrick, San Francisco, CA, 2016 - 2017
- Coastal Sustainability Studio Fellow, Louisiana State University, Baton Rouge, LA, 2016
- Designer & Researcher, The Open Workshop, San Francisco, CA, 2015
- Landscape Designer, Terrain Studio, San Francisco, CA, 2014
- Co-Editor and Director, GroundUp Journal, UC Berkeley, 2012 - 2013
- Designer & Researcher, Hood Studio, Oakland CA, 2011 - 2013
- Research Associate, Arava Institute, Israel, 2010
- Research Associate, Oberlin College, Oberlin, OH., 2009
- Research Coordinator, Perry Institute of Marine Science, Exumas, Bahamas, 2008
- Researcher, RV Heraclitus, Polynesia, 2004

RELEVANT PUBLICATIONS

- "Overlooking Risk Until It's Too Late is No Longer An Option." Smart Cities Dive, 2017
- "Incremental Development." World Landscape Architecture, 2015
- "5 Cities That Will Benefit from Climate Change." Next City, 2014
- "In Iceland's resilience, a lesson for us as our world shifts." The Daily Climate, 2014
- "Better Red Than Dead." Earth Island Journal, 2011
- "Grow Wetlands Fight Global Warming?" The Ecology Center., 2010

PROFESSIONAL AFFILIATIONS

American Society of Landscape Architects

Yerba Buena Center for the Arts

San Francisco Urban Planning Research

The European Futures Observatory

JOHANNA HOFFMAN
johanna@future-iq.com

5.4 Walter Paixao-Cortes, Data Engineer

RÉSUMÉ

EDUCATION

Doctorate in Computer Science (Bioinformatics/ Natural Language Processing)
Pontifical Catholic University of Rio Grande do Sul, 2015 to present

Masters Degree in Computer Science (Bioinformatics)
Pontifical Catholic University of Rio Grande do Sul 2013 – 2015

Bachelors Degree in Computer Science
Pontifical Catholic University of Rio Grande do Sul, 1995 – 2002

EMPLOYMENT

Data Engineer – Future IQ (2017 – present)

Senior Software Engineer – Dell Computers, Brazil (2000 – present)

Software Engineer – Accenture, Brazil (2003 – 2005)

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WALTER R. PAIXÃO-CÔRTES, *MA, BA*

DATA ENGINEER, FUTURE IQ

Walter is a senior software engineer with 24 years of experience in the software development industry, working across different domains including Human Resources, Finance and Product Engineering. He has expertise in data analysis, creating ETL pipelines, building data visualizations in many different technologies (SAP Business Objects, Oracle BI Enterprise Edition, QlikView and Tableau), and has experience in working with high data volumes to extract insights. Walter has an academic background in Computer Science with a Masters in Bioinformatics, and a Doctorate (in progress) in Bioinformatics with a minor in Natural Language Processing.

RECENT PROJECT EXPERIENCE

- Mitchell Forward 2040, South Dakota, 2019
- Park City Vision 2020, Utah, USA, 2019
- New England Regional Defense Industry Collaboration Initiative, USA, 2019-2020
- City of Smithville Visioning and Strategic Action Plan project, Missouri, USA, 2019
- Tillamook County Strategic Planning, Oregon, USA, 2019
- Snohomish County Regional Tourism Destination Development, WA. 2018
- McHenry County College, Crystal Lake, IL. 2018
- Middle Georgia Charrette and Regional Planning, Georgia. 2018
- Coppell Vision 2040 , Coppell, Texas. 2018
- Rural Community Assistance Partnership, Washington D.C. 2018
- Wayzata Community Vision, Wayzata, MN. 2017-2018
- Hilton Head Island Our Future, South Carolina. 2017-2018

WALTER R. PAIXÃO-CÔRTES

walter@future-iq.com

5.5 Tobiloba Adaramati, Data Analyst

RÉSUMÉ

EDUCATION

B.Tech. (First Class) Degree
in Mathematics Education
Federal University of Technology, Minna, 2015

N.C.E Degree in Computer and Mathematics
Federal College of Education
(Technical), Akoka, 2011

EMPLOYMENT

Data Analyst. Future iQ
USA and Europe, 2017 – Present

Results Measurement Expert. JMSF
Agribusiness, Nigeria, 2018 – Present

CEO. Growth Analytics Consulting
Nigeria, 2017 – Present

Monitoring and Evaluation Analyst.
Solina Group, Nigeria, 2016 – 2017

Research Analyst. Solina
Group Nigeria, 2015 – 2016

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TOBILOBA ADARAMATI, *B. Tech. (Edu).*

Data Analyst

Tobiloba Adaramati is a mathematician who sees the beauty in data. She is an expert in data processing, opinion mining, sentiment and reputation analysis. Through her unique perspective, Tobiloba sees each data point as a unique part of a puzzle which put together correctly, creates a clear picture. She uses various forms of data to provide valuable insights and reveal underlying trends. Her background includes a first-class degree in mathematics and experience providing monitoring and evaluation services for international development programs. Tobiloba has worked with Future iQ since 2017, providing data and analytics expertise.

RECENT PROJECT EXPERIENCE

- Mitchell Benchmark Analysis Report, 2019
- Smithville Benchmark Analysis Report, 2019
- Edina Medical Cluster Analysis, 2019

RELEVANT PUBLICATIONS

- Wayzata Benchmark Analysis Report, 2017
- Wayzata 2040, Sailing Ahead, Minnesota, US 2017
- Coppell Vision 2040 Project, Texas, US, 2018

TOBILOBA ADARAMATI

tobiloba@future-iq.com