





SESSION

VERTICAL FARMING PAST PRESENT AND FUTURE



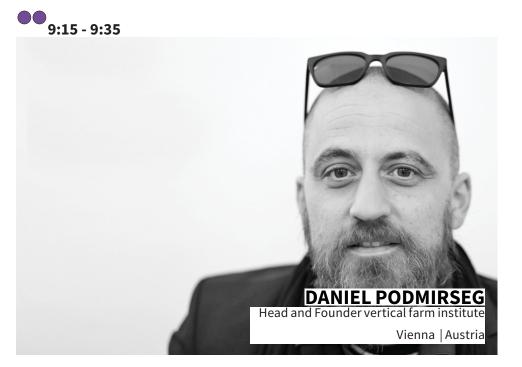
This session will provide an overview of the 50-year history of vertical farming; it will show the need for alternative agricultural technologies and give an outlook on the future of our urban food supply.



"bite your lips, get up and dance"

verticalfarminstitute.org

diploma dissertation and vfi in the name of the vertical farm



Daniel is founder of the vertical farm institute and Vertical Farming expert, studied architecture. His dissertation "up!" deals with the potential of vertical farms with regard to the reduction of energy and land consumption. "up!" is considered a standard work and Dickson Despommier assesses the work as the most comprehensive research on Vertical Farming in the world so far.

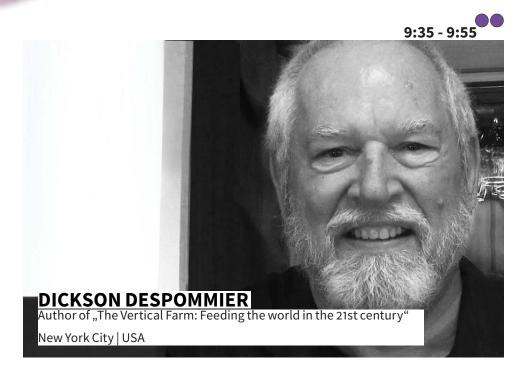




"the autonomous city"

verticalfarm.com

supporter, source of inspiration and hands-on advisor



Dickson is microbiologist, ecologist, and emeritus professor of Public and Environmental Health at the Columbia University. In 2010, he published his widely received book: "The Vertical Farm: feeding the world in the 21st Century". Well known for his podcasts, TED Talks and lectures on vertical farming, Dickson also supports the vertical farm institute as Board Member.



"context and design matters"

agritecture.com

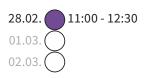
key reference to agtech solutions



Henry is a sustainability strategist focused on urban agriculture, water issues, and emerging technologies. He is Founder of the popular blog Agritecture.com and a Co-Founder of the Association for Vertical Farming (AVF). Three years ago, Henry launched his company Agritecture Consulting (formerly Blue Planet Consulting), a boutique global urban agriculture advising firm where he helps entrepreneurs with vertical farming feasibility studies, recruiting, and systems design.



BERRES conference



SESSION 000000 2

HOW TO SUCCESSFULLY RUN A VERTICAL FARM



The Vertical Farming market of the future demands visionary and long-term strategies, while always retaining an economically realistic perspective. Three case studies of vertical farms will be presented, which will grant exclusive insights into the respective success factors and challenges.



"additional return on investment"

verticalharvest.com

inspiration for alternative business models, social engagement and community inclusion



Nona is uniquely positioned in the Vertical Farming sphere as she is at once a practicing Architect, the Co-Founder, Owner, Designer and CEO of a cutting edge greenhouse, Vertical Harvest of Jackson Hole. This combination has cultivated expertise in both the design, implementation and operation of innovative systems and programs that position Vertical Harvest to be an impact model for communities around the globe.





"connecting leaves to lives in Vienna"

spread.co.jp

world leader in indoor food production



Chris is Assistant Manager for business development at Spread, a Kyoto-based company with over a decade of experience operating Japan's largest indoor vertical farm, capable of producing 21,000 heads of lettuce daily for sale nationwide. Born and raised in Canada, Chris has spent the last 10 years working in Japan where he has had the unique opportunity to understand vertical farming's critical role in easing Japan's issues of food security, resource sustainability and its aging farming population.



"sustainable food supply chain ahead"

farmerscut.com

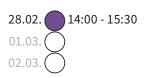
envisioning global network of indoor farms based on sustainable local food chains



Isabel is co-founder and CMO at Farmers Cut, an indoor vertical farming company based in Hamburg with the mission to build a global farm network to deliver locally produced, pesticide-free greens from farm-to-fork. Prior to Farmers Cut Isabel lived in New York working in Marketing for a Swiss skincare company. Isabel holds a B.Sc. in Business Administration from the European Business School and a M.Sc. in International Development from from New York University's Center for Global Affairs.



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SESSION 3 IMPROVE WHAT WE HAVE.

ENERGY, LIGHT AND URBAN FARMING



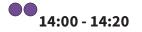


Light is the key to growing healthy and tasty food. This session will shed light on the potentials for increasing energy efficiency in vertical farms. Energy-optimized buildings with transparent facades are up against the still dominant BlackBoxes of today. Vertical farming will have to focus more than ever on utilizing naturally available resources.

"plant enlightenment"

sanlight.info

expert in physics, lighting and LEDs, research partner and supporter of the vfi since the beginning





David is an expert in LED-lighting with many years of experience in horticulture. Using his in-depth knowledge of photonics and semiconductor technology, he co-founded five years ago SANlight (as a company and research institute), with the purpose of developing and manufacturing LED illumination systems for commercial greenhouses, special applications and household use. SANlight won the "Born Global Champion" award in 2016.



"sunlight, power and transparency"

ait.ac.at

developer of building envelopes which fit to the vision of a transparent vertical farm



Christoph is the Head of Competence Unit Photovoltaic Systems at the Austrian Institute of Technology. This Competence Unit provides the future technologies for the next generation of solar cells. Additionally Christoph has a research background in Development of R&D infrastructure for distributed energy technologies.



"Don't grow bigger – grow better!"

cityfarm.wien - oegg.or.at

Winter comes every year. Low light amount and low temperature. But production will continue.



Wolfgang is head of Department Vegetable Growing at Horticultural College and Research Institute in Schönbrunn – Vienna. In his research work he develops alternative vegetable production systems that are seasonal, regenerative and ecological, but nevertheless abundant. In 2012 he founded the City Farm Schönbrunn as a garden of diversity where urban people enjoy growing their own vegetables in cooperation with Austrian Horticultural Society (ÖGG).







VERTICAL FARMS IN THE CONTEXT OF CITY PLANNING



The external nature of our global food supply has an enormous effect on our cities. In this session, political decision makers will be discussing the hurdles and potentials of urban food production. Solutions for the food supply of the resilient city will be the topic of discussion.



"political directives to positive impact"

wien.gv.at/stadtentwicklung

a political advisor taking care of urban and vertical food production spaces



Isabel is the Head of the Section Landscape and Open Space planning for the Department of Urban Planning at the City of Vienna. Before this she took the lead on the European Union project "URBAN SMS", collaborating with cities across Europe this project focussed on urban soil management. At the same time she was involved in the area of "Nature Conservation" in the city of Vienna Department of Environmental Protection. Isabel has an extensive academic background in research regarding nature preservation in urban environments



"resell urban areas to farmers"

wur.nl

developing various matrixes to implement urban food production



Jan Willem as a background in business studies from Rotterdam School of Management, Erasmus University. He graduated on the decline of the International Coffee Agreement and did PhD research on the ability of marine resource users to self-govern their use of common pool resources. In recent years Jan Willem focussed on innovative short food supply chains and urban agriculture, the role of city region food systems in bringing about a more sustainable food system. Jan Willem is active in the board of several urban agriculture start-ups such as GROWx vertical farm in Amsterdam.



"the farm as an urban planning entity"

aerofarms.com

from the farm to the urban network



Stefan is Chief of Staff at AeroFarms, a high-tech, data driven vertical farming company that is revolutionizing agriculture. A passionate advocate for all things ag-tech, Stefan brings with him a background in agriculture, technology, government relations and international affairs. AeroFarms has been recognized as a Circular Economy 100 company, won the World Technology Award for most impactful Environmental Company and received the 2016 New Jersey Governors Award for Environmental Excellence.







SESSION 00000000 5

THE IMPACT OF VERTICAL FARMING ON FOOD JUSTICE



An increase in urban food production is accompanied by a range of issues like that of ownership, social acceptance, and changes in the individuals' behavior. These and similar issues will be at the core of the session.



"vertical farming to support SDG"

franz-fischler-consult.co.at

enabeling the discussion to what extend vertical farming can support the reachment of the second sustainability goals



Franz became widely known and much respected both domestically and internationally when he was EU commissioner. Between 1995 and 2004, the future of European agriculture was in his hands. Franz Fischler implemented his vision of modern agriculture in far-reaching reforms of European farming policies, rural development and fisheries. Since December 2015 he is president of the Institute for Advanced Studies in Vienna, since 2012 president of the European Forum Alpbach.



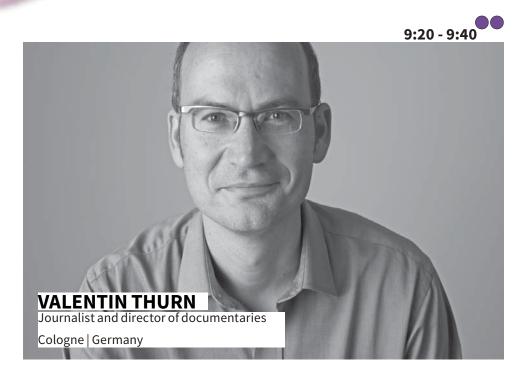
BERRES conference



"where's our food coming from?"

thurnfilm.de

director of documentaries which highlight the biggest challenges of future food production



Valentin is director and producer of more than 50 television documentaries and reports on social, developmental, environmental and educational issues. His shooting and lecture tours have taken him to over 50 countries on all continents. For his films, he received a number of prizes and awards. "Taste the Waste" was a box office hit in 2011/12, and "10 Billion – What's on your plate?" was the most successful German cinema documentary in 2015. He is chairman of the association "Taste of Heimat", board member of the association "Foodsharing Germany" and co-Founder of the International Federation of Environmental Journalists (IFEJ).



"encouraging local policy makers"

saskiasassen.com

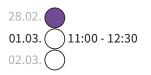
Who owns the vertical farm? Which economic system guarantees the resilient city?



Saskia is the Robert S. Lynd Professor of Sociology and member of The Committee on Global Thought, Columbia University. Her latest book is Expulsions: Brutality and Complexity in the Global Economy (Harvard University Press 2014) now out in 18 languages. She is the recipient of diverse awards, including multiple doctor honoris causa, the Principe de Asturias 2013 Prize in the Social Sciences, and made a Foreign Member of the Royal Academy of the Sciences of Netherland.









INTERACTIVE SESSION



This interactive workshop session brings you together with our speakers from different fields of expertise to come up with proposals for the future city.



"fullfilling crop needs"

www.boku.ac.at

integrity between cultivation- and production methods and crop choice





Anna is the head of the Division of Vegetables and Ornamentals at the BOKU in Vienna. Her research focuses on quality aspects of horticultural products under several cultivation systems (e.g. hydroponic, aquaponics, vertical farming), environmental influence, stress factors, storage and processing systems; pre- and postharvest physiology of horticultural plants, crop plant and stress physiology, evaluation and improvement of nutritive and economic values of horticultural products as raw and processed food for human health.



"cultivation in extremes"

eden-iss.net

cultivated food in the Antartica until last week



Conrad made his diploma in industrial engineering, specialized in space technology. Since 2012 scientific member of the Institute of Space Systems (DLR) in Bremen, Germany. Member of the EDEN ISS project, which focuses on ground demonstration of plant cultivation technologies and their application in space. EDEN ISS develops safe food production for on-board the International Space Station (ISS) and for future human space exploration vehicles and planetary outposts.



"the city as spaceship"

liquifer.com

vertical farming between biosphere and space



Barbara is an internationally active space architect, design researcher and educator. Barbara Imhof is the co-founder and CEO of LIQUIFER Systems Group, an interdisciplinary team comprising engineers, architects, designers and scientists. Her projects deal with spaceflight parameters such as living with limited resources, minimal and transformable spaces, resource-conserving systems; all aspects imperative to sustainability. Since the 2000s Barbara is also involved in biomimetic designs for architectural structures.



"include the community"

mcts.tum.de

considering the sensitivity of the community regarding verticalised food production



MASCHA GUGGANIG

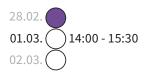
Postdoctoral Researcher, Munich Center for Technology in Society (MCTS) Munich | Germany

> Mascha Gugganig is the principal investigator of the EIT Food (European Institute of Innovation & Technology) project "Cultivating Engagement: a citizen participation forum on vertical farming" partnering among others with PlantLab and EUFIC (European Food Information Council). As trained anthropologist, at the MCTS research group Innovation, Society & Public Policy she researches the socio-cultural, ethical, and political dimensions of how food, land, agriculture and technoscience intersect.



"FOOD PRODUCTION WILL BECOME PART OF DAILY URBAN LIFE AGAIN."







THE MARKET FOR VERTICAL FARM PRODUCTS



An increase in urban food production is accompanied by a range of issues like that of ownership, social acceptance, and changes in the individuals' behavior. These and similar issues will be at the core of the session.

"internalise externalities!"

fao.org

increases food production in desert zones



JOSEF SCHMIDHUBER Deputy Director, Trade and Markets Division, FAO Rome | Italy

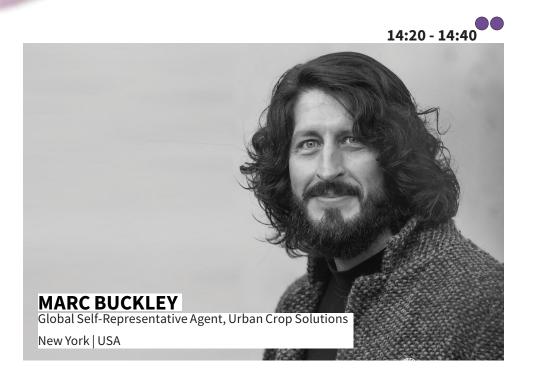
Josef is the Deputy Director in the Trade and Markets Division of the UN's Food and Agricultural Organization (FAO). His work has been published in numerous books, peer reviewed journals, or as documents of international organizations such as the OECD, the IPCC, and the FAO. His areas of interest include commodity market analysis and outlook, trade and investment in agriculture, global food and nutrition issues, climate change, as well as links between bioenergy and agricultural markets. He holds a M.Sc. degree in agricultural economics and a Ph.D. in economics from the Technical University of Munich.



"invest in sustainable products"

markbuckley.earth

agent of a young but succesful belgium company



Marc is a serial entrepreneur, he has been involved in many companies as well as several international family businesses: indeed he comes from five generations of German organic farmers and three generations of European Hydroponic Agronomists. Marc has spoken internationally on climate change food reform and green business in many events worldwide in the last past years. His speaking topics include: Impact Innovations and Innovations for Purpose, Reversing Global Warming, Systems Thinking, Vertical Farming, Closed Environmental Agriculture, how to reform Food Industry, Future of Food, and much more.



"be passionate about your work"

infarm.de



Daniel is a business pro (MBA) and having gathered tech and nutrition experience at Foodora (Rocket Internet), Daniel is currently leading the Sales and Key Account Management at INFARM, ready to revolutionize where, what and how we grow. INFARM is a pioneering on-demand farming service, providing urban communities with fresh, nutritious products by distributing smart vertical farms across the city, directly where people live and eat.



BERRE Conference





VERTICAL FARMING AWARD

The winner of our call for project represents the need for engagement, education and inspiration to make the future city resilient.





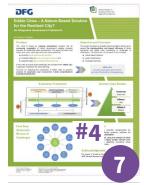


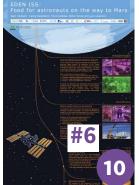
We will hybridise the workshop outputs of the participants with the next steps of our efforts to intensify urban vertical food production. Key focus of the next years is to develop a deeper understanding of the implementation gap.



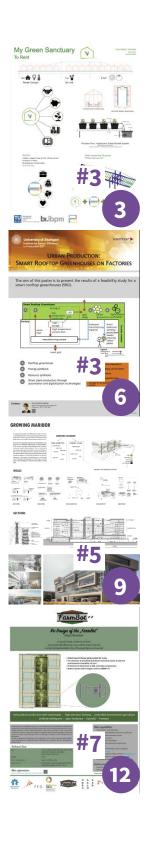












BERRES conference

slot Nr. CALL FOR PROJECT :: NOMINEES :: SKYBERRIES AWARD

#1	1	GREENfutureSCHOOLS, Maria Soledad Penaranda Moren, Azra Korjenic,		
		TU Wien, Faculty of Civil Engineering, Institute of Building Construction and		
		Technology, Vienna, Austria		
#1	2	PATERNOSTER 7.0, Nina Alisa Habe, Bsc, TU Graz, Graz, Austria		
#3	3	My Green Sanctuary - to Rent, Anna-Maria Tazreiter, TU Wien, Vienna,		
		Austria		
#3	4	Light is advancing - Smart Horticulture Solution, Sebastian Olschowski		
		OSRAM GmbH, München, Germany		
#3	5	URBAN OASIS, Mag. arch. Markus Jeschaunig, Agency in Biosphere, Graz,		
		Austria		
#3	6	SMART ROOFTOP GREENHOUSE (SRG) – Feasability Study, Martin Reisin-		
		ger, Fraunhofer Institute for Manufacturing Engineering and Automation		
		IPA, Institute for Energy Efficiency in Production, Stuttgart, Germany		
#4	7	EDIBLE CITIES - A NATURE BASED SOLUTION FOR THE RESILIENT CITY?,		
		An Integrative Assessment Framework, Dr. Martina Artmann, Leibniz Ins-		
		titute of Ecological Urban and Regional Development (IOER), Andernach,		
		Haar, Munich, Germany		
#5	8	THE GREEN CITY – GROWTH DELIMITER FOR IVY AND WILD WINE AL-		
		LOWS LARGE SURFACE GREENING IN TOWNS; Peter Boogaerts, GGGreen		
		(Ground based gable greening) – SME, Paris – Antwerp – Mechelen, France		
		– Belgium		
#5	9	GROWING MARIBOR, Tajda Potra TU GRAZ), Maribor, Slovenia		
#6	10	EDEN ISS: Food for astronauts on the way to Mars, MSc Luuk Graamans,		
		Wageningen University & Research, Wageningen, the Netherlands		
#7	11	URBAN FARMING ROBOLAB, DI Christian Aschauer, University of Natural		
		Resources and Life Sciences (BOKU), Vienna, Austria		
#7	12	Farmbot++, Mag. Theresa Heitzlhofer, Leopold Zyka, 2expnplus1, alche-		
		mia-nova GmbH, Vienna, Austria		

CALL FOR PROJECT :: NOMINEES :: SKYBERRIES AWARD

slot Nr.

	#1	1	GREENfutureSCHOOLS, Maria Soledad Penaranda Moren, Azra Korjenic,
	200		TU Wien, Faculty of Civil Engineering, Institute of Building Construction and
	-		Technology, Vienna, Austria
			With the purpose of integrating green systems in everyday education for
1			children, Green future Schools provides a cleaner and more sustainable
PATERNOSTER 7.04 CONTRACTOR			environment through green architecture.
The articles	#1	2	PATERNOSTER 7.0, Nina Alisa Habe, Bsc, TU Graz, Graz, Austria
			This project explores the integration of public activities with high-rise
₩ ± #1			vertical farms. Areas such as restaurants, markets or research intertwi-
			ne with the VF greenhouses.
My Green Sentbury	#3	3	My Green Sanctuary - to Rent, Anna-Maria Tazreiter, TU Wien, Vienna,
2.01			Austria
			In the heart of the 3rd District of Vienna, the green sanctuary acts as
#3			community hub. Within its boundaries, it calls residents to rent their
BE _bultom ⊟			own greenhouses a grow their vegetables on a local level.
Non-Internet Light in advantation Light in advantation	#3	4	Light is advancing – Smart Horticulture Solution, Sebastian Olschowski,
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	#3	4	Light is advancing - Smart Horticulture Solution, Sebastian Olschowski,
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Handback			Light is advancing – Smart Horticulture Solution, Sebastian Olschowski, OSRAM GmbH, München, Germany With technological advancement, comes a need to optimize as much as possible the tools for horticulture. This project proposes advanced cus- tomisable lighting solutions for indoor plant production.
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slot Nr.

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	#4	7	EDIBLE CITIES - A NATURE BASED SOLUTION FOR THE RESILIENT CITY?,
	π.4	1	An Integrative Assessment Framework, Dr. Martina Artmann, Leibniz Ins-
DFG			titute of Ecological Urban and Regional Development (IOER), Andernach,
Team Team (Construction) Team (Construction) Tea			
·			Haar, Munich, Germany
H4 Harriss			"Edible Cities" interprets the city as a socio-ecological system and explo-
The statement			res the impact which large scale green infrastructure and nature-based
			solutions might have on urbanization.
	#5	8	THE GREEN CITY – GROWTH DELIMITER FOR IVY AND WILD WINE AL-
THE GREEN CITY GROWTH DE WITT COL ITY AND THE PARTY AND THE COL ITY AND THE PARTY AND THE COL ITY AND THE PARTY AND THE COL ITY AND THE COL ITY AND THE THE PARTY AND THE COL ITY AND THE COL			LOWS LARGE SURFACE GREENING IN TOWNS; Peter Boogaerts, GGGreen
			(Ground based gable greening) – SME, Paris – Antwerp – Mechelen, France
			- Belgium
			This project offers a controlled growth environment for ivy plants and
			wild wines on a textile sublayer fixed to a facade. The growth of the
CREMING RANDOR			plants is limited to the shape of the mounting mechanism.
	#5	9	GROWING MARIBOR, Tajda Potra TU GRAZ), Maribor, Slovenia
			This Master Thesis explores the integration of vertical farms in a public
#5			leisure centre. It also tackles the energetic advantages and challenges of
9			mixing public activities within buildings with a functional vertical farm.
	#6	10	EDEN ISS : Food for astronauts on the way to Mars, MSc Luuk Graamans,
			Wageningen University & Research, Wageningen, the Netherlands
#6			This project simulates the growth of crops in extreme environments with
10			particular focus on the future production of food on Mars.
Unan Farming Robotab	#7	11	URBAN FARMING ROBOLAB, DI Christian Aschauer, University of Natural
			Resources and Life Sciences (BOKU), Vienna, Austria
			The main purpose of the Robolab is to provide outdoor laboratories in
			the city bounds of Vienna and create a research environment for integra-
11			tion of robotics in Urban Farming.
	#7	12	Farmbot++, Mag. Theresa Heitzlhofer, Leopold Zyka, 2expnplus1, alche-
Farmilias **			mia-nova GmbH, Vienna, Austria
Parameter at a second s			The improved version of the Farmbot aims to be developed on a vertical le-
			vel in the in-between spaces of the city. Apart from crop production, this
#7			robot would ensure the usage of wastewater and control the quality of the
an san 🗟 🔫 Hina			plants.





vertical farm institute Capistrangasse 2/10 1060 Vienna

verticalfarminstitute.org skyberries.at