

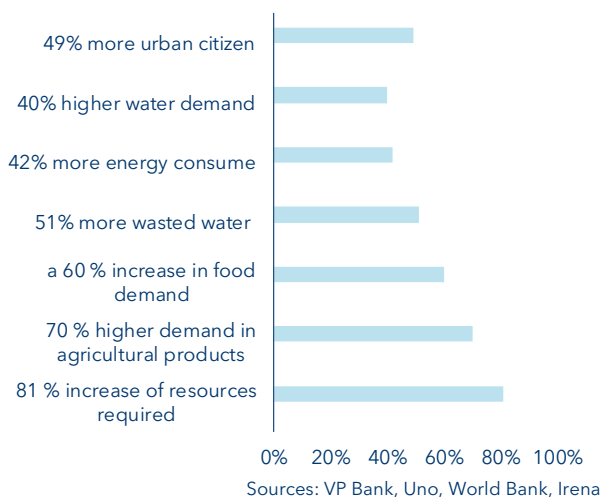
# Green City

## Theme facet 2: Clean utility

RESOURCE EFFICIENCY, RECYCLING AND ENVIRONMENTAL SUSTAINABILITY WILL SHAPE URBAN DEVELOPMENT IN THE COMING DECADES. THIS APPLIES TO ALL ASPECTS OF POWER AND WATER SUPPLY. ALTERNATIVE ENERGY SOURCES, THE USE OF URBAN GREEN SPACES FOR ADDITIONAL FOOD SUPPLY, AND THE PRESERVATION OF BIODIVERSITY ARE ALREADY CENTRAL TOPICS FOR INNOVATIVE URBAN PLANNERS.

But by far the most important issue in the public utility area is water supply. If demographic expectations prove out, the world population will rise to 9 billion people by 2030. Assuming a current average daily water consumption of 160 litres per person, this extrapolates an increase in water demand of 40% according to the "Water Resources Group", an adjunct of the World Bank. In the USA, the average per capita H<sub>2</sub>O consumption is 500 litres; in Los Angeles alone, it is as much as 770 litres. If this remains the case, the water reserves of the American megacity will dry up in about 50 years. Los Angeles is still in a relatively good starting point, but 14 of the world's largest cities are already struggling with supply bottlenecks and drastic water pollution. This situation is made even more difficult by the fact that, on average, one-fifth of the world's potable water seeps away during the transmission process.

Accelerated urbanisation through the year 2050 means:



A city that fails to come up with a solution for its water supply cannot grow sustainably. The inevitable consequences are worrisome for manufacturing companies and other industrial groups as they account for the lion's share of demand (70+%) for fresh water. US consumer goods company Procter & Gamble therefore initiated the industry-wide "50-Litre-Home Coalition", which is striving to reduce the daily per capita water need to 50 litres. In this regard, technical solutions are just as important as things

like information campaigns, water treatment methods and the reuse of water in the home. US-based Advanced Drainage Systems, for example, offers innovative solutions in the field of water supply, such as highly efficient water pipes, drainage solutions and water storage systems. On top of such measures, digitalisation also offers a helping hand here. One technique that has emerged thanks to digital transformation is smart metering, i.e. the digital measurement and analysis of water consumption. This is an important element in the effort to efficiently accommodate increasing demand for water and detect leaky water pipes. Depending on the given city, the existing conduits are simply too old, as in London, or extremely long, as in Tokyo, where a 26,613 km long water supply network provides the city-dwellers with water.

Another focal point is quality analysis. Through the use of mobile sensors, greywater can be monitored and the resulting realtime data stored in the Cloud for further analysis. Depending on the condition of the water, it can be redirected to the various consumption groups. The current coronavirus pandemic in particular has brought to light the strengths of systematic water analysis. Already days before an outbreak or renewed increase of COVID-19 infections, it has been possible to detect the virus in wastewater. This accelerates the localisation of the outbreak as well as shortens the response time for necessary measures.

This is just one example of how diverse the approaches are for supplying a city more efficiently and sustainably with the basic utilities its inhabitants need.

# Green City

Opportunities from sustainable urbanisation

## Contact

### VP Bank Ltd

Aeulestrasse 6  
9490 Vaduz · Liechtenstein  
T +423 235 66 55 · F +423 235 65 00 · [info@vpbank.com](mailto:info@vpbank.com)

### VP Bank (Switzerland) Ltd

Talstrasse 59  
8001 Zurich · Switzerland  
T +41 44 226 24 24 · F +41 44 226 25 24 · [info.ch@vpbank.com](mailto:info.ch@vpbank.com)

### VP Bank (Luxembourg) SA

2, rue Edward Steichen · L-2540 Luxembourg  
T +352 404 770-1 · F +352 481 117 · [info.lu@vpbank.com](mailto:info.lu@vpbank.com)

### VP Bank (BVI) Ltd

VP Bank House · 156 Main Street · PO Box 2341  
Road Town · Tortola VG1110 · British Virgin Islands  
T +1 284 494 11 00 · F +1 284 494 11 44 · [info.bvi@vpbank.com](mailto:info.bvi@vpbank.com)

### VP Bank Ltd Singapore Branch

8 Marina View · #27-03 Asia Square Tower 1  
Singapore 018960 · Singapore  
T +65 6305 0050 · F +65 6305 0051 · [info.sg@vpbank.com](mailto:info.sg@vpbank.com)

## Content responsibility

Bernd Hartmann, Leiter CIO-Office  
Harald Brandl, Senior Equity Strategist  
Marcello Musio, Senior Equity Analyst  
Dominik Pross, Junior Investment Strategist

## Important legal information

This document was produced by VP Bank AG (hereinafter: the Bank) and distributed by the companies of VP Bank Group. This document does not constitute an offer or an invitation to buy or sell financial instruments. The recommendations, assessments and statements it contains represent the personal opinions of the VP Bank AG analyst concerned as at the publication date stated in the document and may be changed at any time without advance notice. This document is based on information derived from sources that are believed to be reliable. Although the utmost care has been taken in producing this document and the assessments it contains, no warranty or guarantee can be given that its contents are entirely accurate and complete. In particular, the information in this document may not include all relevant information regarding the financial instruments referred to herein or their issuers.

**Additional important information on the risks associated with the financial instruments described in this document, on the characteristics of VP Bank Group, on the treatment of conflicts of interest in connection with these financial instruments and on the distribution of this document can be found at [https://www.vpbank.com/legal\\_notice\\_en](https://www.vpbank.com/legal_notice_en)**