



TECHNOLOGICAL  
CHANGES &  
PLANNING –  
“WHAT DOES IT  
ALL MEAN”



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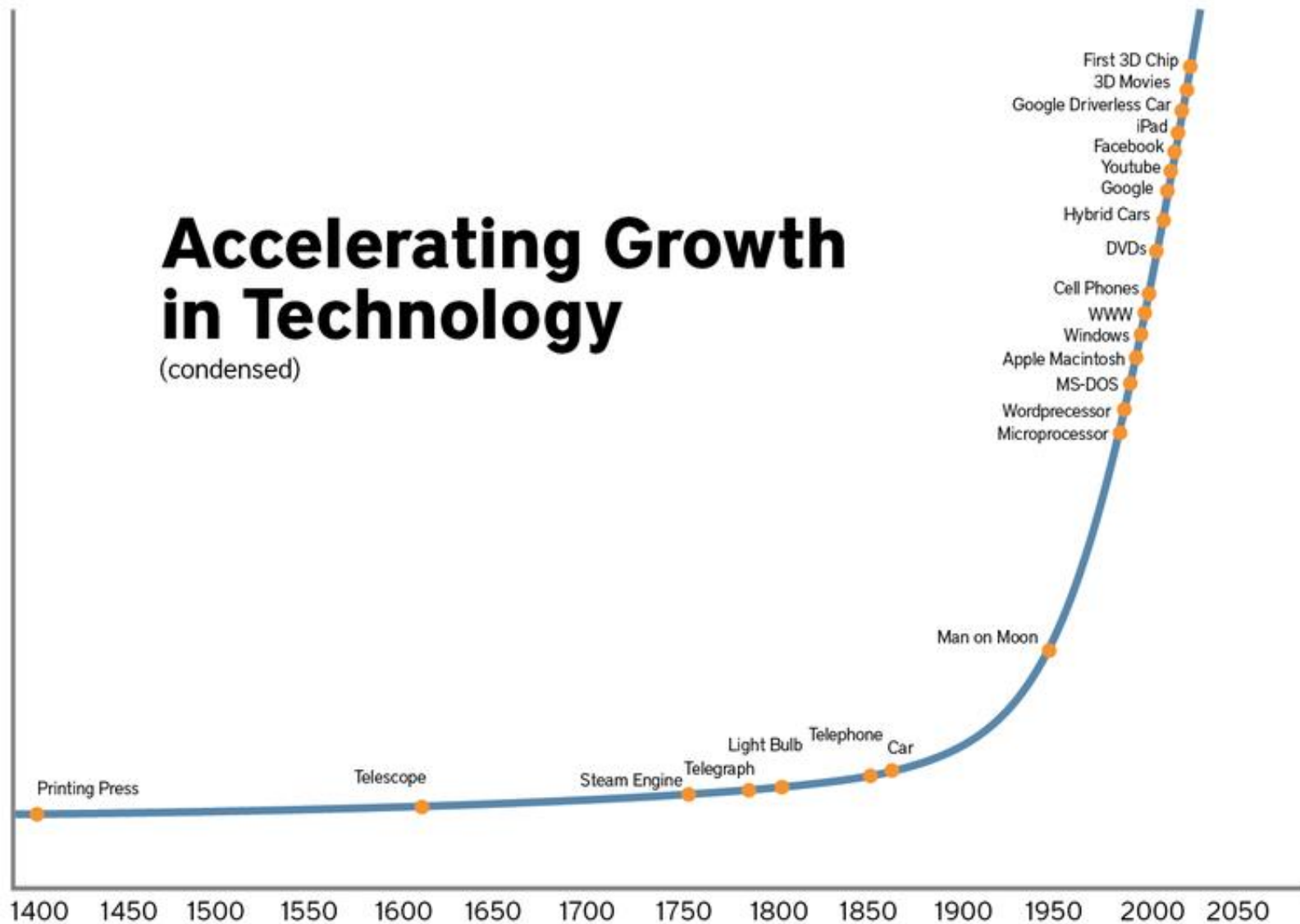


# Presentation Today

- Exponential Impact of Technological Changes
- Electric Vehicles
- Autonomous vehicles
- Drones
- Membrane Bioreactor System (MBR)
- 3-D printers
- Conclusion



# Exponential Impact



# Electric Vehicles

➤ Charging Stations

➤ Land Use Change



# Fully Autonomous Vehicles

➤ Parking

➤ Road capacity

➤ Land Use

➤ Jobs

➤ Safety

➤ <http://www.bing.com/videos/search?q=autonomous+freight+trucks&&view=detail&mid=FFD12690E6296EC5B4B4FFD12690E6296EC5B4B4&FORM=VRDGAR>

➤ <http://www.bing.com/videos/search?q=rINSPEED+eTOS+cONCEPT+CAR&&view=detail&mid=A3EA8E76E866B533A685A3EA8E76E866B533A685&FORM=VRDGAR>

➤ <https://www.facebook.com/futurism/videos/554350121410858/>



# Drones

➤ Regulations – different levels government

➤ Positive Impacts

➤ Negative Impacts

➤ Potential Land Use Changes

➤ Delivery of products

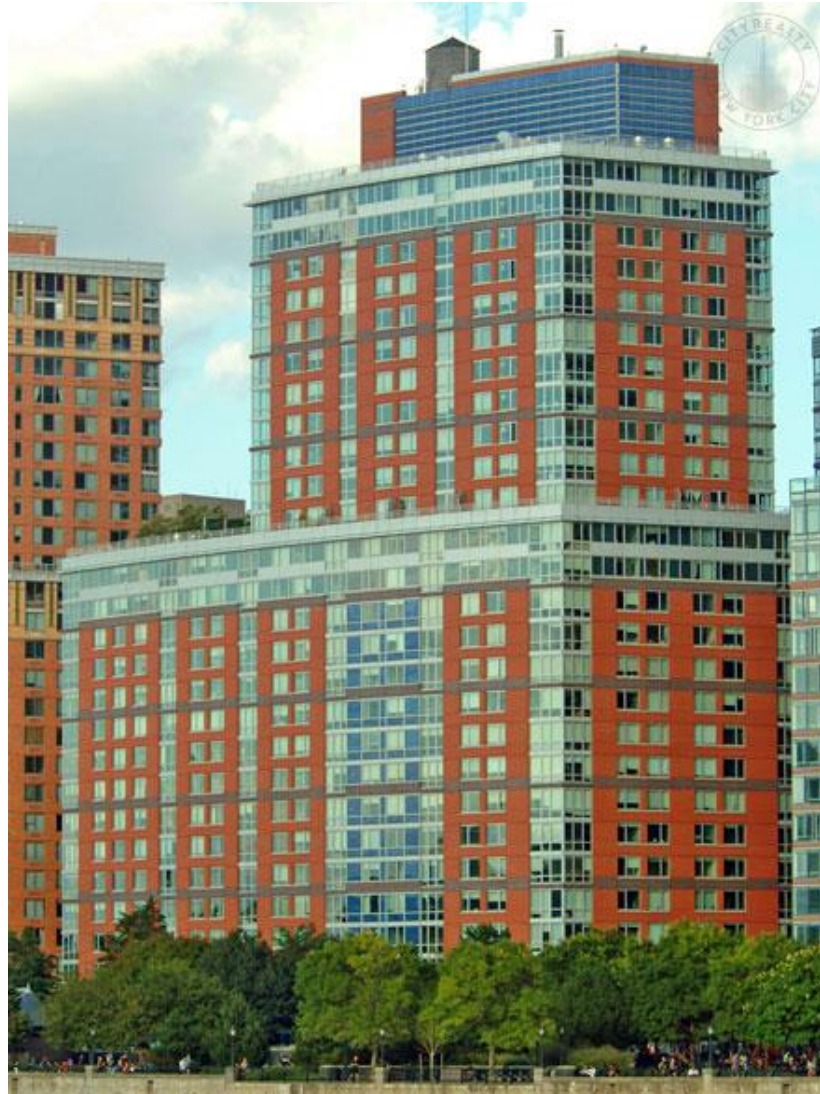


➤ <http://www.bing.com/videos/search?q=Drone+delivery+of+products&&view=detail&mid=DDIED6E448BI9CDAF684DDIED6E448BI9CDAF684&FORM=VRDGAR>



# Membrane Bioreactor Systems (MBR)

- MBR Community Base System vs Traditional Systems
- Environment
- Land Use Impact
- Challenges



The Solaire,  
New York



# 3-D Printers

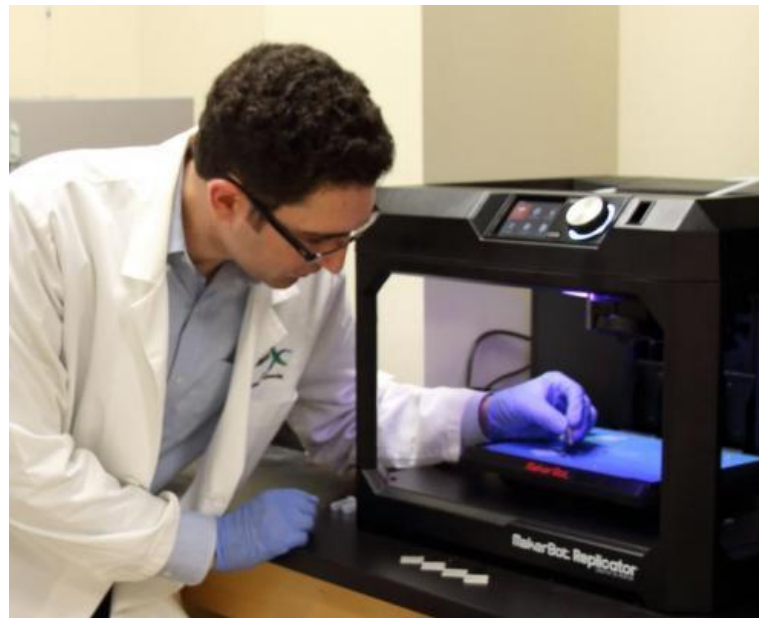
➤ Impact on transportation network

➤ Cost of parts

➤ Employment

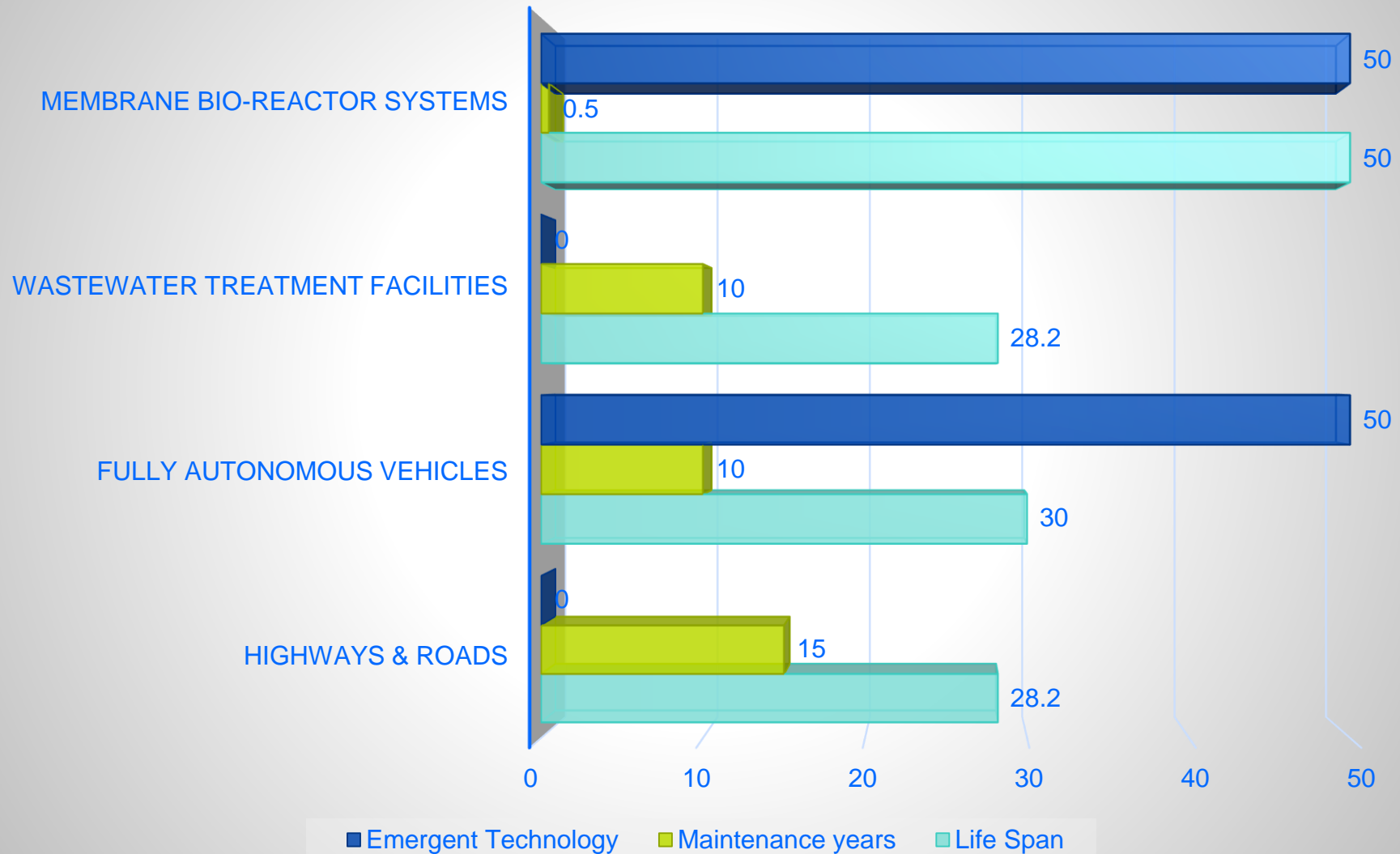
➤ Land Use

➤ <http://www.bing.com/videos/search?q=3-D+printer&&view=detail&mid=262CCDEA5CA8D3C741E2262CCDEA5CA8D3C741E2&FO RM=VRDGAR>





## Investment Comparative



# CONCLUSIONS

- Land uses and how we plan
- Large Capital Projects (Roads/Rail/Sanitary/Storm)
- Legislation and Regulation (Government)
- How we live, work and play
- Environment
- Employment
- Health

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# CONCLUSIONS

➤ The fear of change – do we have to be dragged into the future or do we embrace these shifts as opportunity for diversification?

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→ Source: Randell Arendt Conservation Development