CYBERSECURITY SMART CITIES

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TABLE OF CONTENTS

01

INTRO

Morocco

02

CYBERSECURITY PROBLEMS

Everything can go wrong and will.

03

SOLUTIONS

How to mitigate those problems.

04

THE FUTURE

What comes next.

MOROCCO

- Tangier Tech, 2017 launch
- Opening of large malls and creation of new developments
- Does a Smart City have to look like a Western metropolis?

MOROCCO

- Minsait won a contract to develop an urban data platform for waste collection, markets, slaughterhouses, and more.
- Saves 45% in energy, 35% in water.

02

CYBERSECURITY PROBLEMS

Everything can go wrong
and will.

CYBERSECURITY IS THE SECOND BIGGEST PROBLEM.

Data Privacy is the first!

Some other problems:

- **Loss of culture/language**
- **Slums and inequality**
- **A potential increase in harm to the planet**
- **Solar flares + other crazy things?**

CYBERSECURITY RISKS

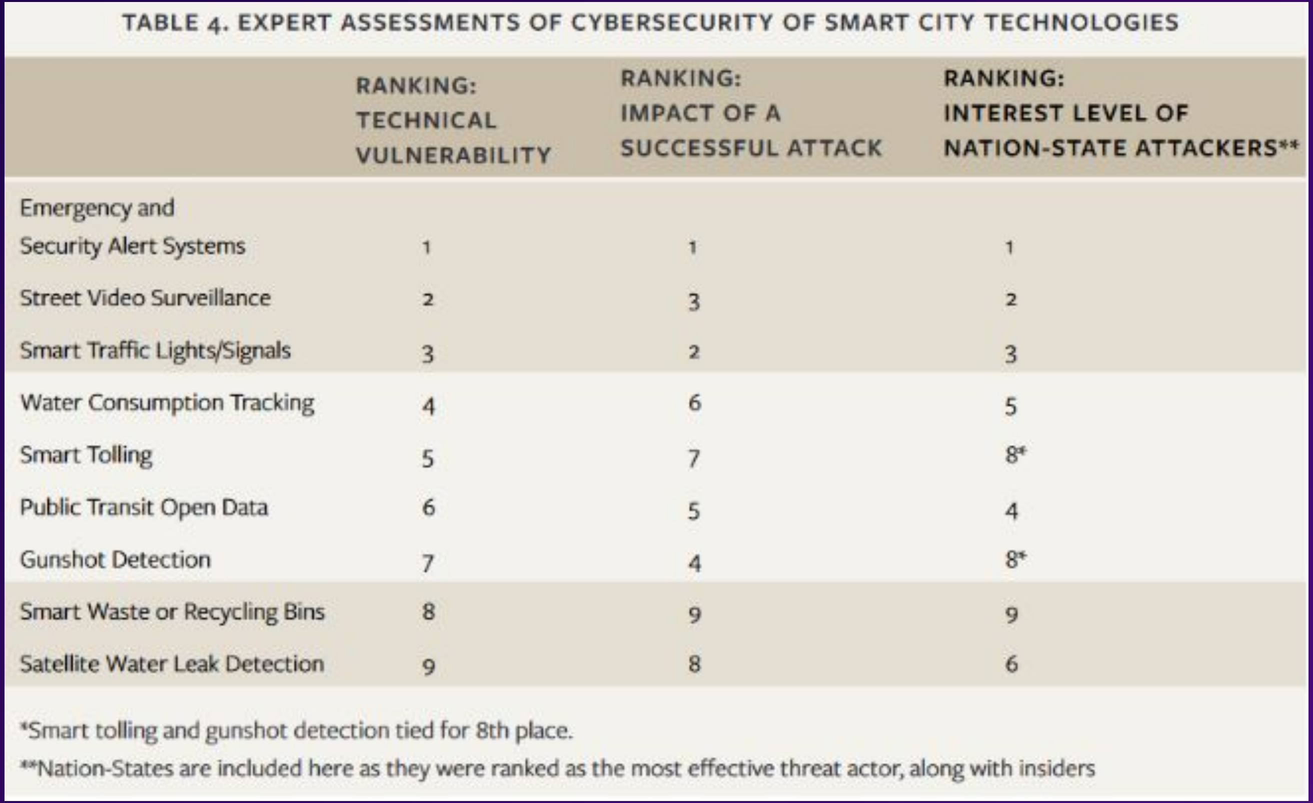


TABLE 4. EXPERT ASSESSMENTS OF CYBERSECURITY OF SMART CITY TECHNOLOGIES

	RANKING: TECHNICAL VULNERABILITY	RANKING: IMPACT OF A SUCCESSFUL ATTACK	RANKING: INTEREST LEVEL OF NATION-STATE ATTACKERS**
Emergency and Security Alert Systems	1	1	1
Street Video Surveillance	2	3	2
Smart Traffic Lights/Signals	3	2	3
Water Consumption Tracking	4	6	5
Smart Tolling	5	7	8*
Public Transit Open Data	6	5	4
Gunshot Detection	7	4	8*
Smart Waste or Recycling Bins	8	9	9
Satellite Water Leak Detection	9	8	6

*Smart tolling and gunshot detection tied for 8th place.

**Nation-States are included here as they were ranked as the most effective threat actor, along with insiders

CYBERSECURITY RISKS

- In 2017, hackers turned on 156 severe weather sirens.
- Cybercrime costs $6 trillion annually.
- Government actors and terrorists will be lured to attack. (E.g. Russia’s 2007 cyberattack on Estonia)
- There will be an estimated 1.3 billion wide-area network smart city connections by 2024.
- Despite all this, cybersecurity is often an afterthought.

SOME ATTACKS

- Data and identity theft.
- Hijacking devices.
- Man-in-the-middle attacks (posing as the sender).
- DDoS failures
- Ransomware.
- Physical destruction of networks.

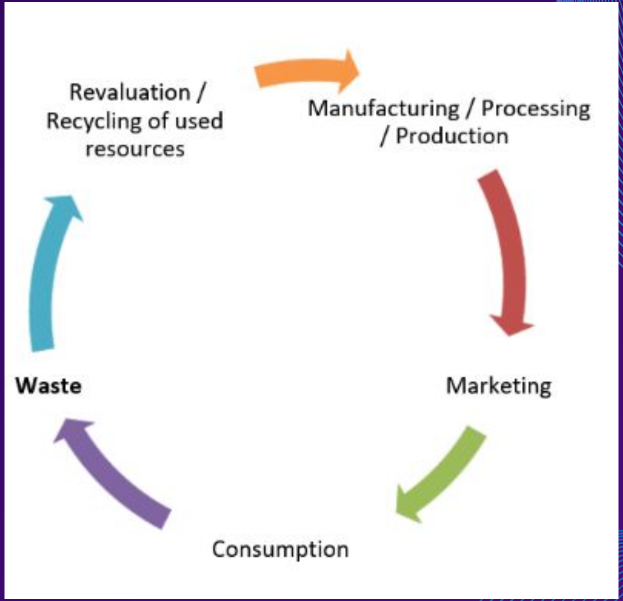
03

SOLUTIONS

How to mitigate problems.

ARE YOU READY?

- DON'T create a Smart City until you're ready.
- You need democracy, education, knowledge, and a circular economy focused on humans and ethical growth.
- Learn everything first!
- Create partnerships with nearby allies, but don't rely on foreign gov's to create your cities.



Revaluation / Recycling of used resources

Manufacturing / Processing / Production

Marketing

Consumption

Waste

HOW TO PREPARE WHEN CREATING YOUR CITY

- Start small.
- Avoid overreliance.
- Hire a dedicated security team.
- Like online banking, use security by design and default.
- Prepare for the worst.
- Mandate certification frameworks.
- Deter cybercriminals with honeypots/other processes.

HEY, TOM, I JUST REALIZED THAT I DON'T NEED TO OUTRUN THE BEAR; I ONLY NEED TO OUTRUN YOU.

WHAT TO DO ONCE YOUR SMART CITY EXISTS

- **Encrypt all your data always.**
- **Don’t collect data you don’t need to. Store the minimum.**
- **Don’t use Smart Cities for law enforcement!**
- **Have a far-reaching support platform (SaaS, IaaS, cloud, etc.)**
- **Have backups of everything.**
- **Control third party access.**
- **Protect the identity of devices cryptographically.**
- **Have white hat hackers testing ALL THE TIME!**

WHAT TO DO ONCE YOUR SMART CITY EXISTS

- **Have decentralized power grids.**
- **Follow industry standards at every step.**
- **Conduct regular audits, especially for important areas (like flood detection in flood zones).**
- **Move data for traffic control and grid systems only in one direction to networks + the cloud, so they can’t be controlled through the internet.**
- **Have physical life boats and manual overrides.**
- **Link up the absolute minimum.**

CYBER ATTACK
25315
ONLINE
4527
17563

DURING AN ATTACK

- Rely on your system: security monitoring, immediate incident response, vulnerability management, and patching.
- Monitor and assess in real-time.
- Rely on cybersecurity fighters. (We need an international cyberforce, like firefighters, and there needs to be insurance for Smart Cities.)
- If the worst happens, rely on nearby cities, countries, and partnerships.

AFTER AN ATTACK

- Share information with international partners.
- Release limited data to public, prioritizing long-term safety and ensuring a lack of panic.

INTERNATIONAL LAW NOTES

- **WE NEED AN INTERNATIONAL CYBER TREATY.**
- **WE NEED AN INTERNATIONAL CYBERSECURITY ALLIANCE.**
- **Cyber warfare against Smart Cities should be seen as a presumptive violation of international law and the Geneva Conventions.**
- **No attacking SC's, even during conflict.**

04

THE FUTURE

What comes next?

The Future

Cities that aren’t limited by borders

Happier, more productive people who waste less time

Freedom, democracy, equality

IS IT WORTH IT?

"Risk-taking is the essence of innovation."

—Herman Kahn

CONNECT WITH ME

Do you have any questions?

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Free mentorship/mental health support!

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