Smart Construction Presentation

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1. INTRODUCTION

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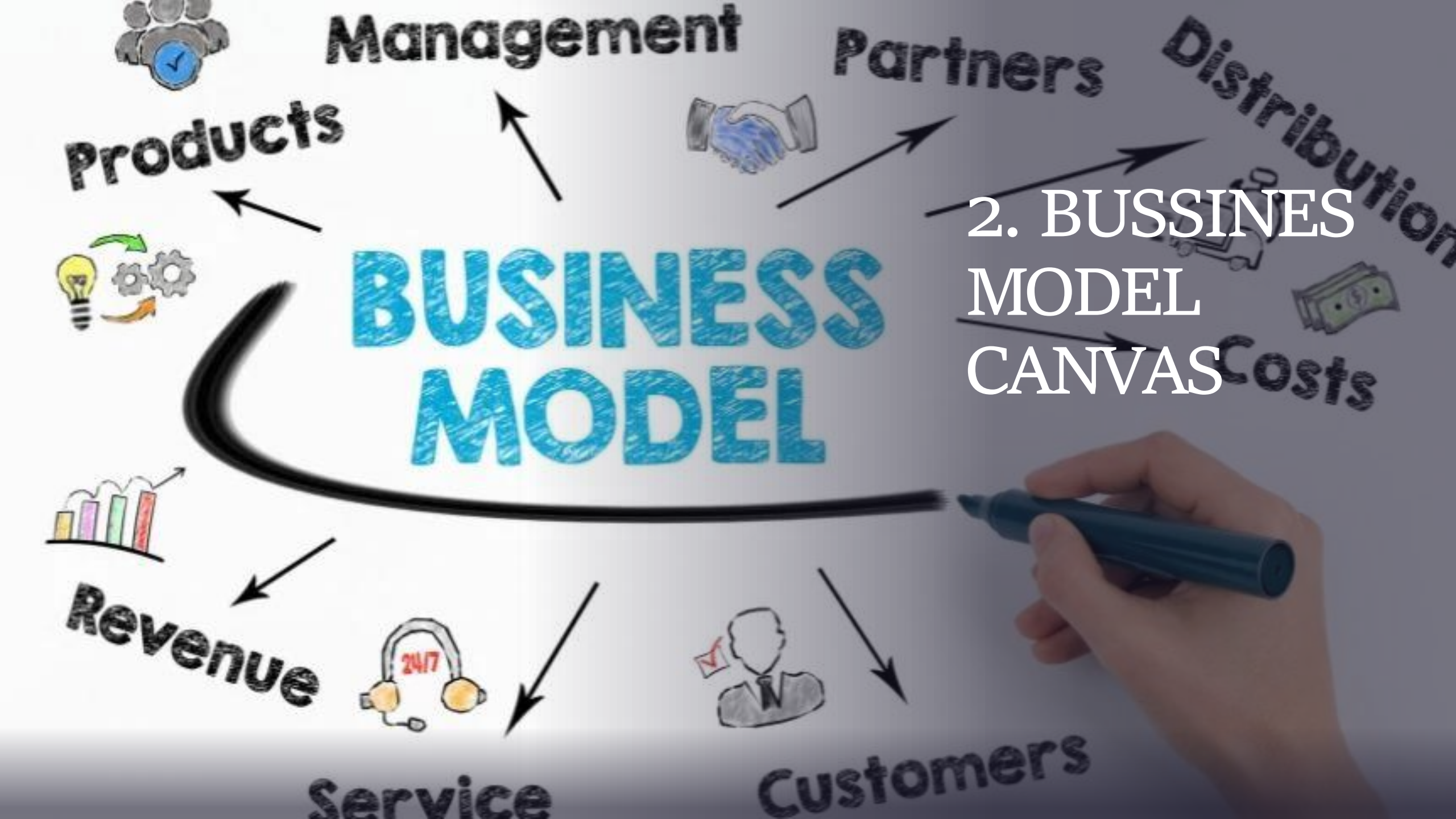
'Smart' technologies allow to create a more efficient, safer and clearer working environment on construction sites.

- Massive connectivity
- Track-to-order
  - Adjust inventory if necessary
- Easier to find cause of disappearance



2. BUSSINES MODEL CANVAS

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KEY PARTNERS

- Payment systems
- Testers
- Consultancy agency
- Financial partners
- Modeling software companies (e.g: Microsoft, Siemens, Project Management software...)
- Investors
- Lock company
- Other construction companies

KEY ACTIVITIES

- Inventory, resource tracking
- Heat map to indicate danger zones and detect clashes using drones.
- Map to track employee and machine traffic

KEY RESOURCES

- Hardware and servers
- Drones , raspberry pi's
- Machine learning
- Employees (Software developpers, infrastructure engineers, construction employees …)
- Camera sensors

SERVICES

- Provide an overview of inventory for a more efficient construction flow.
- Security to minimize work accidents and employee down-time.
- Improve efficiency and reduced downtime

RELATIONSHIPS

- Excellent customer and maintenance services
- Customer service forum/email for quick inquiries and maintenance questions
- Company website to provide information and documentation.
- Social media pages for marketing and company updates

CHANNELS

- On-site employees
- Software as a service

CLIENTS

- Construction companies
- Governement facilities
- Civil engineering sector

COST CENTRES

- Innovation
- Marketing & Sales expenses
- Team
- Research and development
- Software licenses
- Hardware
- Employee training
- Advertising

REVENUE STREAMS

- Subscription using lincenses
- Personalized offers based on data of customer spending

3. General Data Protection Regulation (GDPR)

3. GDPR

Smart Cities GDPR is defined by **ISO**

- Camera usage
- Right of information
- Retention period

3. GDPR

General standard:

- **ISO/IEC 27570: Privacy guidlines for smart cities**

Privacy standards

- **ISO/IEC 29100: privacy framework**
- **ISO/IEC 29134: privacy impact assestement**
- **ISO/IEC 27701: privacy information management system requirements**
- **ISO/IEC 29151 code of practice for PII protection**
- **ISO/IEC 27550 privacy ingineering**

IoT Standars

- **ISO/IEC 30141 IoT Reference Architecture**

4. CYBERSECURITY

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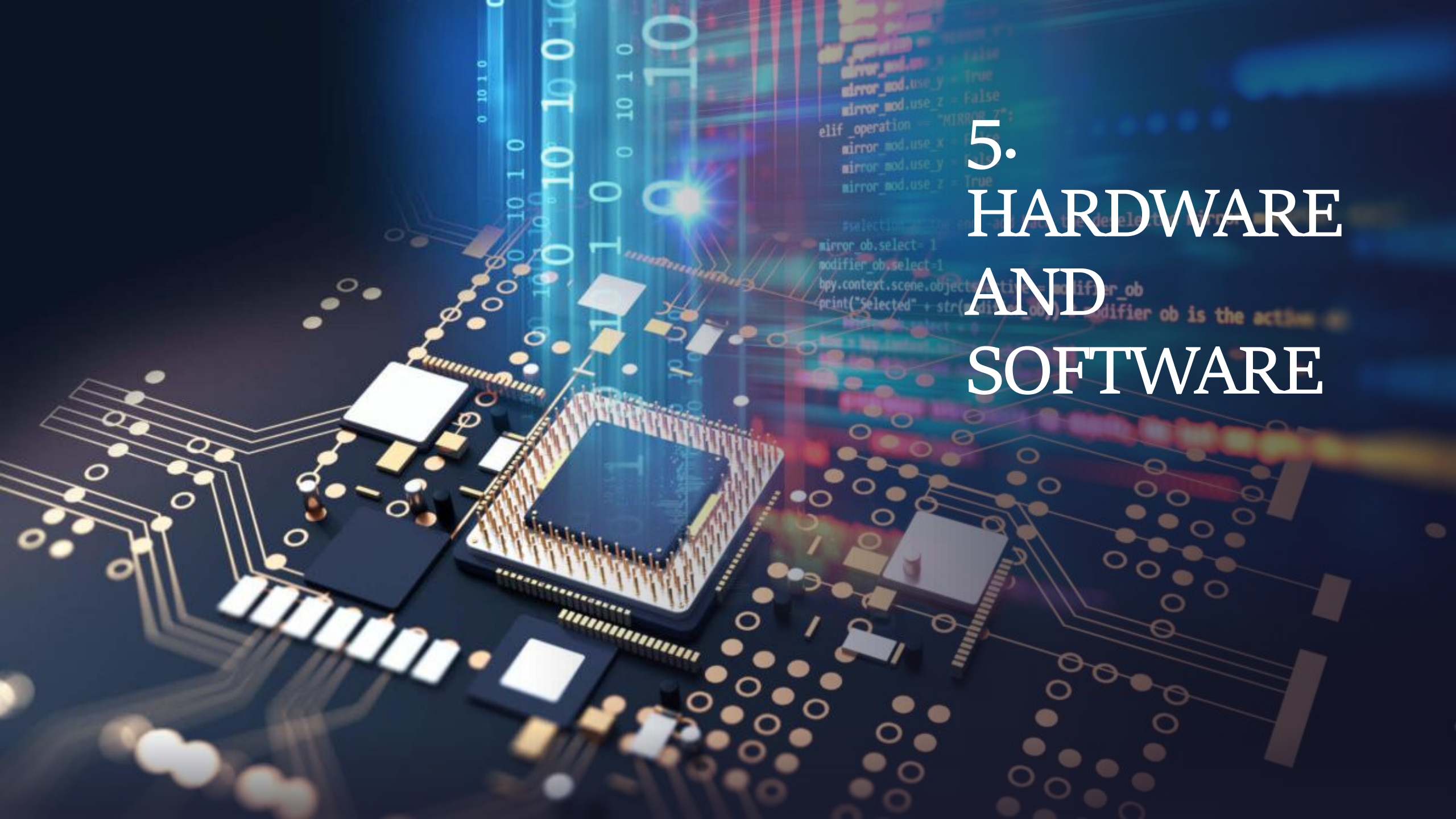

5. HARDWARE AND SOFTWARE

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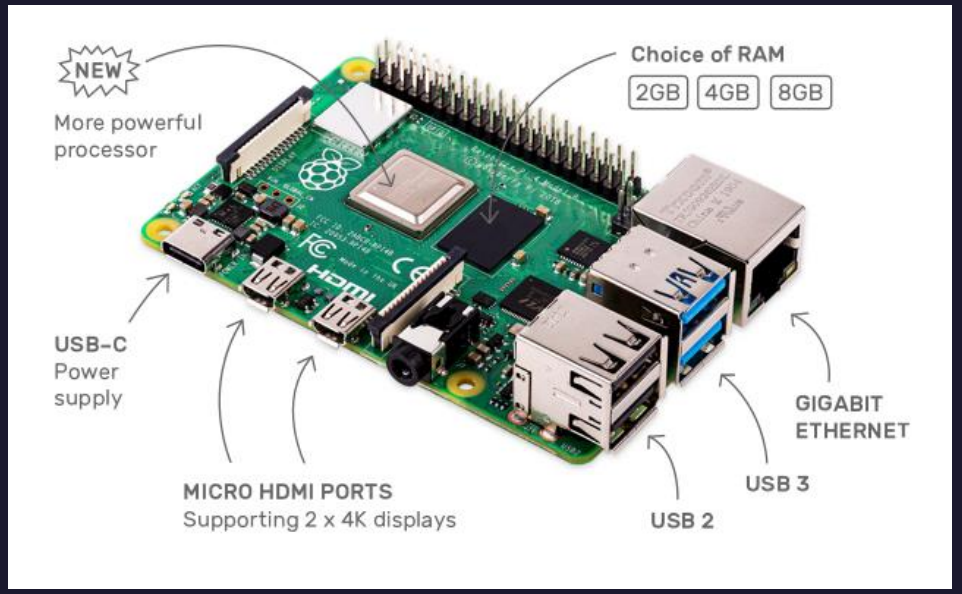
- RaspberryPi 4 Model B
- Raspberry Pi OS
- Low cost, credit-card sized SBC

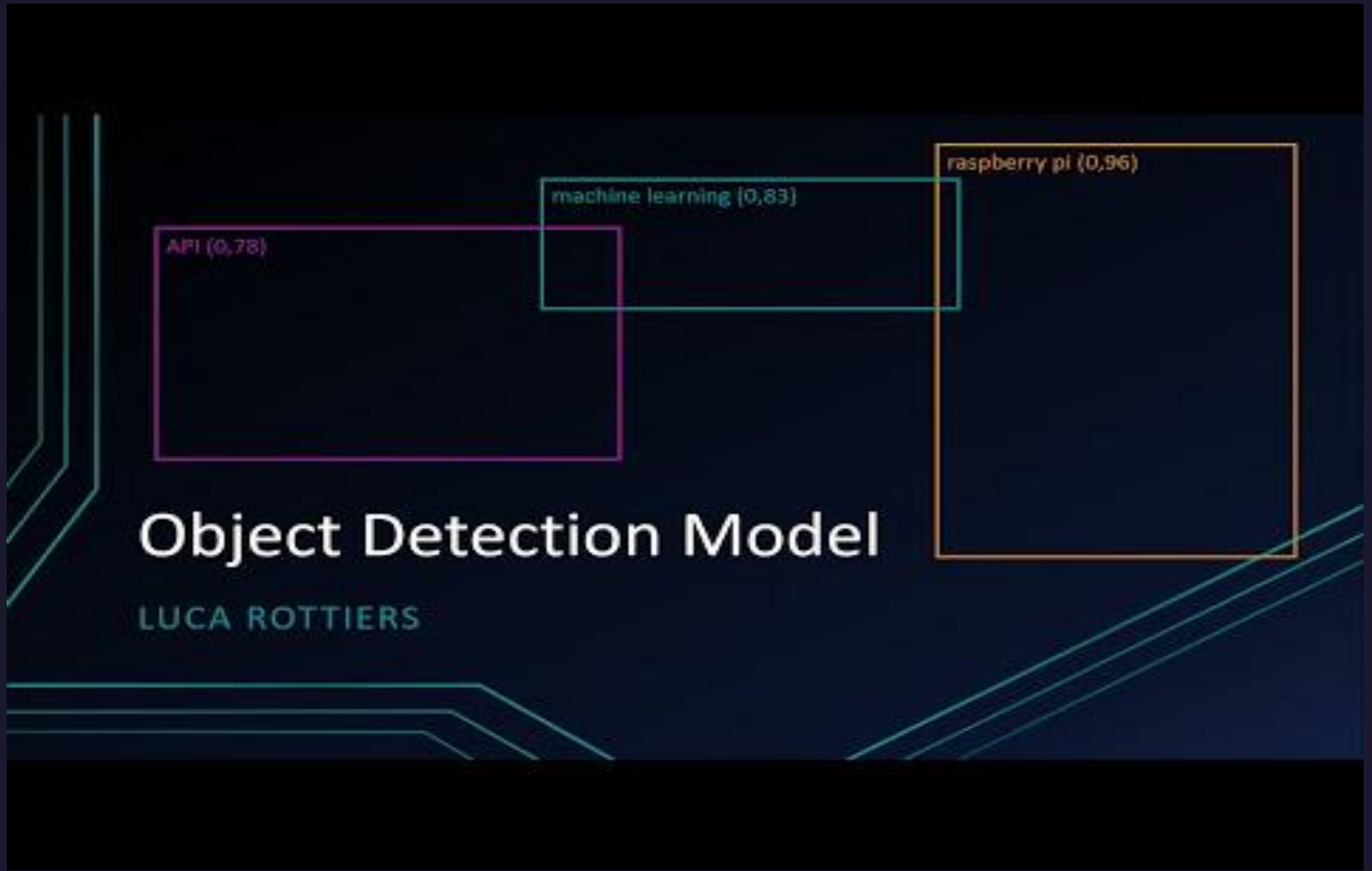


5. HARDWARE AND SOFTWARE

- Video camera

5. HARDWARE AND SOFTWARE

- End-to-end open source platform for machine learning.
- Comprehensive
- Flexible ecosystem of tools
- Easily build and deploy ML powered applications


raspberry pi (0,96)
machine learning (0,83)
API (0,78)
Object Detection Model
LUCA ROTTIERS

6. BUDGET

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- Tracking camera's
- Cheapest option
- RFID readers can be (too) expensive

7. CONCLUSION

- Smart City concept
- Bussines Model Canvas
- GDPR
- Machine Learning technology and artificial vision
- Hardware and software systems
- IoT vulnerabilities
- Exchange ideas


Thanks for your
attention!