



GRC

Deepdive Architectural blueprint and MDP

Robert Dirks

Security Architect - Shield vzw

A low-angle, upward-looking photograph of several modern skyscrapers with glass facades. The buildings are reflected in each other, creating a complex geometric pattern. The sky is visible at the top, filled with soft, white clouds. The overall color palette is dominated by blues, greys, and the reflective surfaces of the glass.

Introduction

Purpose
Agenda

Introduction

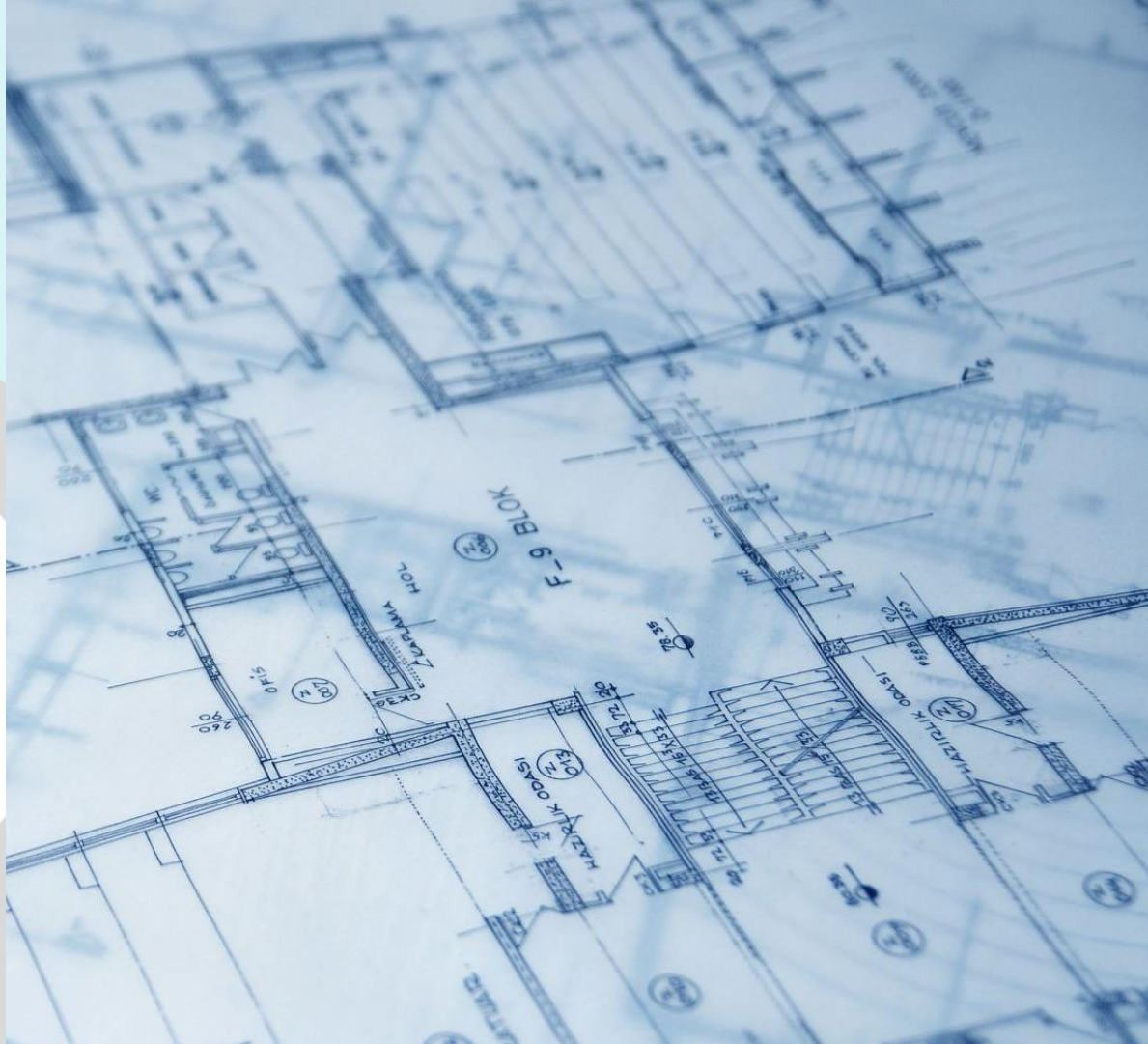
- Purpose
 - Provide more information on
 - Architectural blueprint
 - Medical Device Policy (MDP)
- Agenda
 - Sit-rep (20 minutes)
 - The GRC Team
 - Assessments
 - Visualisation PowerBI
 - ISO27001 implementations
 - Architectural blueprint
 - Q&A (10 minutes)



Architectural blueprint

Deepdive into the blueprint and the Medical Device
Policy

Why



- Industry-Specific blueprint
 - Policies, Procedures & Guidelines
- ISO 27001 & CyFun based
- Regulatory requirements
- Risk management

The mystica aspect of GRC

GRC is the integrated collection of capabilities that enable an organization to achieve objectives, address uncertainty, and act with integrity while ensuring IT governance aligns with business goals.

Source: ISACA

A framework for managing company policies, risk exposure, and compliance obligations to maintain ethical standards and regulatory requirements.

Source: Gartner

A structured approach to aligning IT with business objectives while effectively managing risk and meeting compliance requirements.

Source: NIST

Framework supporting Governance, Risk & Compliance

■ Governance

- Strategic alignment with business objectives
- Clear roles & Responsibilities
- Structured decision-making
- Continuous improvement

■ Risk

- Threat & Vulnerability management
- Risk identification, Assessment & Treatment

■ Compliance

- Regulatory & ISO 27001 Adherence
- Audit readiness & Documentation
- Monitoring & Evidence-based controls

Template documentation

- Providing a blueprint of
 - Policies
 - Procedures
 - Processes
- To align business with security and reduce organizational risks
- Using reference
 - Frameworks
 - ISO27001
 - CyFun



Medical device policy

Part of the architectural blueprint

Medical Device Policy (MDP)



- Update
 - 1.0 version
 - Reviewed
 - Community
 - Suppliers (via Agoria)
- Deepdive
 - Definition
 - Asset management
 - Suppliers management
- In the future

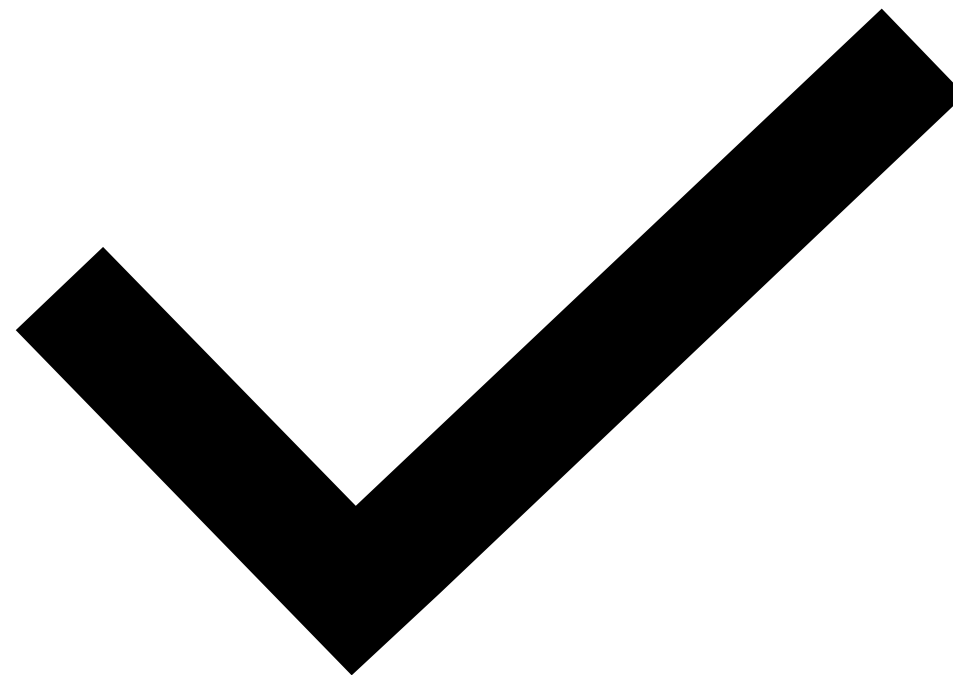
Reason to define the policy

- Structure a risk based approach
 - Remove aspects based on the identified risk
- Single template to be applied
- Issue of no industry specific policy



Update

- 1.0 version finalised 25 Februari 2025
- Besides the policy
 - Leaflet
 - Providing information on the usage of the policy and the other documents
 - Mappingstable, definition and risk matrix
 - Mappingstable to other frameworks
 - Definition and basis of the definition
 - Risk matrix and scenario's
 - Lifecycle Medical Device
 - Process
 - RASCI
 - Operational checklists



Deepdive



- Asset management
 - If there is none these are the requirements
 - Register
 - Hostname
 - MAC Address
 - Hardware specifications
 - Serial numbers
 - Additional info (based on MSD2)
 - Maintain the register

Deepdive

- Supplier management
 - Comply to hospital policies
 - Comply to sector specific frameworks
 - Documented evaluation
 - Access management requirements



Deepdive

▪ Risk-Classification:

Category-of-information	MDR-Medical-Device-Class			
	Class-I	Class-IIa	Class-IIb	Class-III
Special-Personal-Data	5	5	5	5
Information-Decision-for-the-Care-Process	3	3	4	5
Ordinary-Personal-Data	2	2	3	5
Information-Supporting-the-Care-Process	1	2	3	5

Summary table of the 5-risk-class-scale of medical devices

- Risk scenario
 - 1-5
 - Data categories
 - Supporting care information
 - Ordinary personal data
 - Special personal data
 - Decisive care information
- Identify risk related to information security

Future



Excel mappingstable per category



Mapping tenders to frameworks



Review for broader public



More indepth suppliers or vendor risk management / evaluation



Translation of the document (Adoptation of the industry)

Excel mappingstable per category

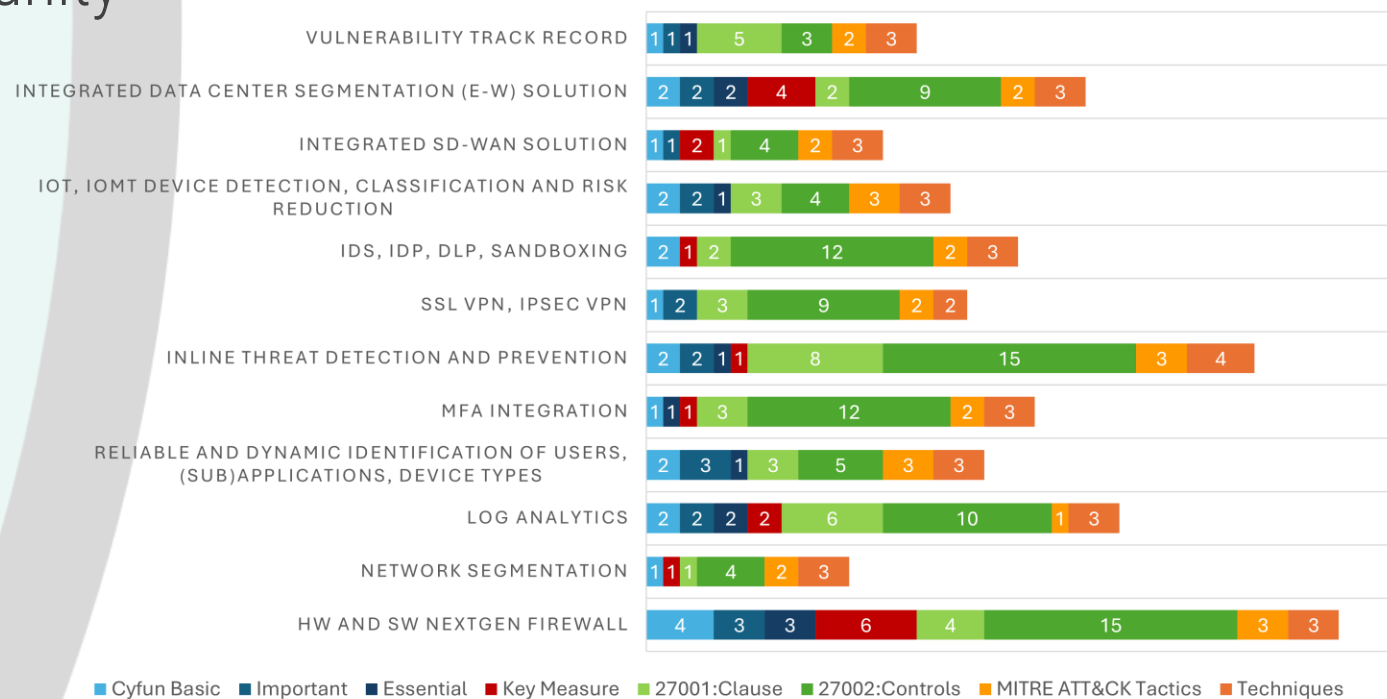
- Review the categories with experts (BioTek / BioTD)
- Define weight matrix classification
- Review by GRC experts

Medical Device		Device Application		MDR	Data Categories				Environment Risk			Risk Classification		
Types	Types Notes	Sub-types	Sub-type Notes	MDR Class	Supporting Care Information	Ordinary Personal Data	Special Personal Data	Decisive care Information	Clinical Environment	Invasiveness	Fallback / Redundancy	Risk Sum	Risk Score	Risk Interpretation
Angiography	Imaging of blood vessels using contrast dye and X-rays.	Diagnostic Angiography	Typically lower risk, as it involves imaging without extensive intervention.	Class IIb	Yes	Yes	Yes	Yes	Ancillary / Diagnostic	Invasive / Surgical	No Redundancy	17	5	Severe (Highest) Risk
Angiography	Imaging of blood vessels using contrast dye and X-rays.	Interventional Angiography	Medium to high risk due to invasive procedures (e.g., stent placement, embolization).	Class IIb	Yes	Yes	Yes	Yes	Medium-Acuity Inpatient	Invasive / Surgical	No Redundancy	14	4	High Risk
Angiography	Imaging of blood vessels using contrast dye and X-rays.	Emergency / Trauma Angiography	Often critical risk because of urgent, life-saving interventions in unstable patients.	Class IIb	Yes	Yes	Yes	Yes	High-Acuity / Critical Care	Invasive / Surgical	No Redundancy	16	5	Severe (Highest) Risk
Central Stations	Centralized hubs aggregating patient data from multiple monitors.	ICU / High-Acuity Monitoring	Used in critical care settings (ICUs, CCUs) to aggregate and display multiple vital signs from highly acute patients (e.g. invasive blood pressure, advanced respiratory parameters).	Class IIb	Yes	Yes	Yes	Yes	High-Acuity / Critical Care	Non-Invasive	Partial Redundancy	15	4	High Risk
Central Stations	Centralized hubs aggregating patient data from multiple monitors.	Telemetry / Cardiac Monitoring	Primarily focused on continuous cardiac telemetry (ECG) for patients needing real-time rhythm surveillance.	Class IIb	Yes	Yes	Yes	Yes	Medium-Acuity Inpatient	Non-Invasive	Partial Redundancy	14	4	High Risk
Central Stations	Centralized hubs aggregating patient data from multiple monitors.	General Ward / Multi-Parameter Monitoring	Central station used in lower-acuity or general ward environments for basic vital signs (e.g., heart rate, SpO ₂ , blood pressure) from multiple bedside monitors.	Class IIa	Yes	Yes	Yes	Yes	Medium-Acuity Inpatient	Non-Invasive	Partial Redundancy	12	4	Moderate Risk

Mapping tenders to frameworks

- Other tenders
- Review with suppliers
- Publication towards community

MAPPING: NGFW PALO ALTO



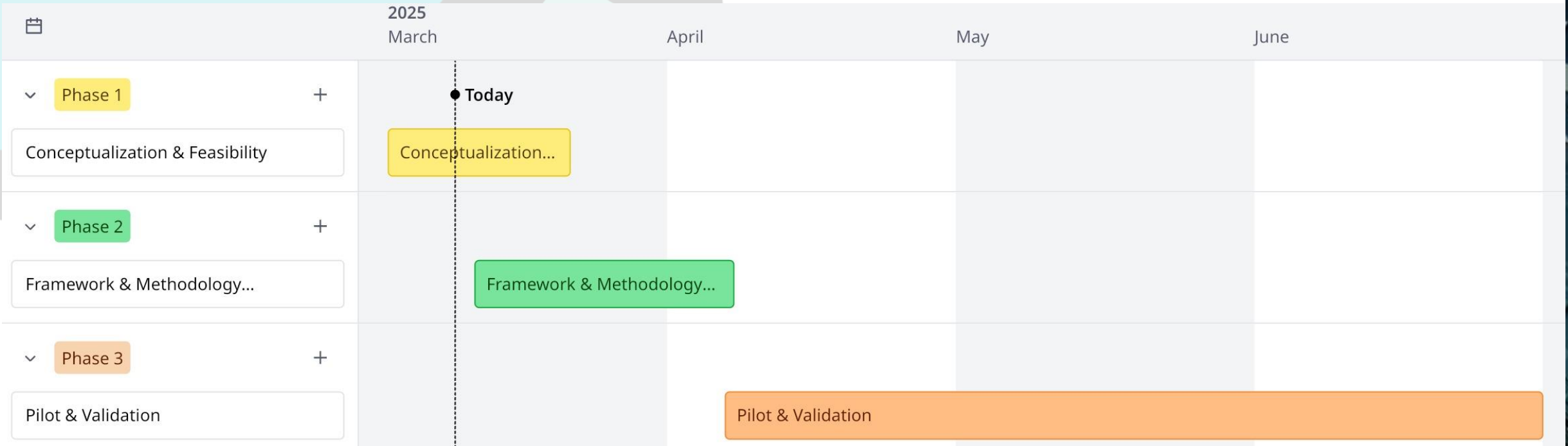
Suppliers or vendor risk management / evaluation

- Evaluation of categories
- Expand risk evaluation
- Define based categories an approach
 - For example: Critical supplier (Based on MDR category) -> Questionnaire and interview
- Provide risk estimation per supplier

Suppliers or vendor risk management / evaluation

- Risk evaluation (per category)
 - Current version
 - Supporting care information
 - Ordinary personal data
 - Special personal data
 - Decisive care information
 - New version
 - Clinical environment
 - Critical care / Medium – acuity inpatient / Outpatient / Diagnostic
 - Invasiveness
 - Non-Invasive / Minimally invasive / Invasive or Surgical
 - Fallback / Redundancy
 - Conclude on risk score (calculation)
 - Risk interpretation (classes)

Suppliers or vendor risk management / evaluation



Note: timeline is still under review





THANK YOU!

Robert Dirks

robert.dirks@shield-vzw.be

+32 491 34 79 14