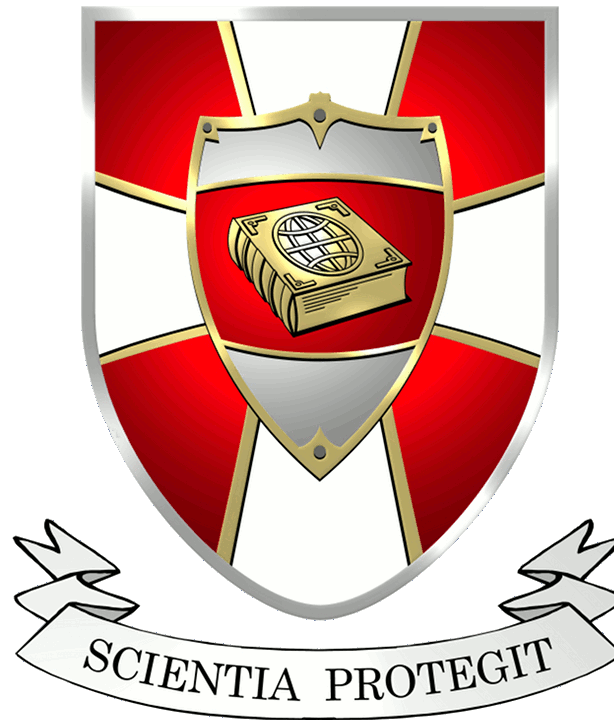


BwJFOCOM C-IED Centre



National C-IED Database



Summary for Moderator

The next presentation provides a short overview of the German Counter IED Database. At the beginning, Danny is talking about the identified problems caused by the old approach, the main requirements and the frame conditions for the new C-IED database.

The main part of the presentation shows how the new concept solves these problems and gives some examples.

You are very welcome to ask your questions at the finishing Question/Answer section. Danny is also prepared to explain the concept at a technical level.



Introduction, Database Design

Background

- Computer Science (University of Federal Armed Forces, DEU)
- Operations Research (Naval Postgraduate School, USA)
- Database Developer/Analyst at NATO HQ
- Chief Analyst at RC North, ISAF

Current Assignment

- Operations Research Analyst at BwJFOCOM C-IED Center

Main Tasks

- Supporting the C-IED Exploitation Process with Quantitative Analysis
- Implementation of the DEU C-IED database
- Collecting data in Theatre



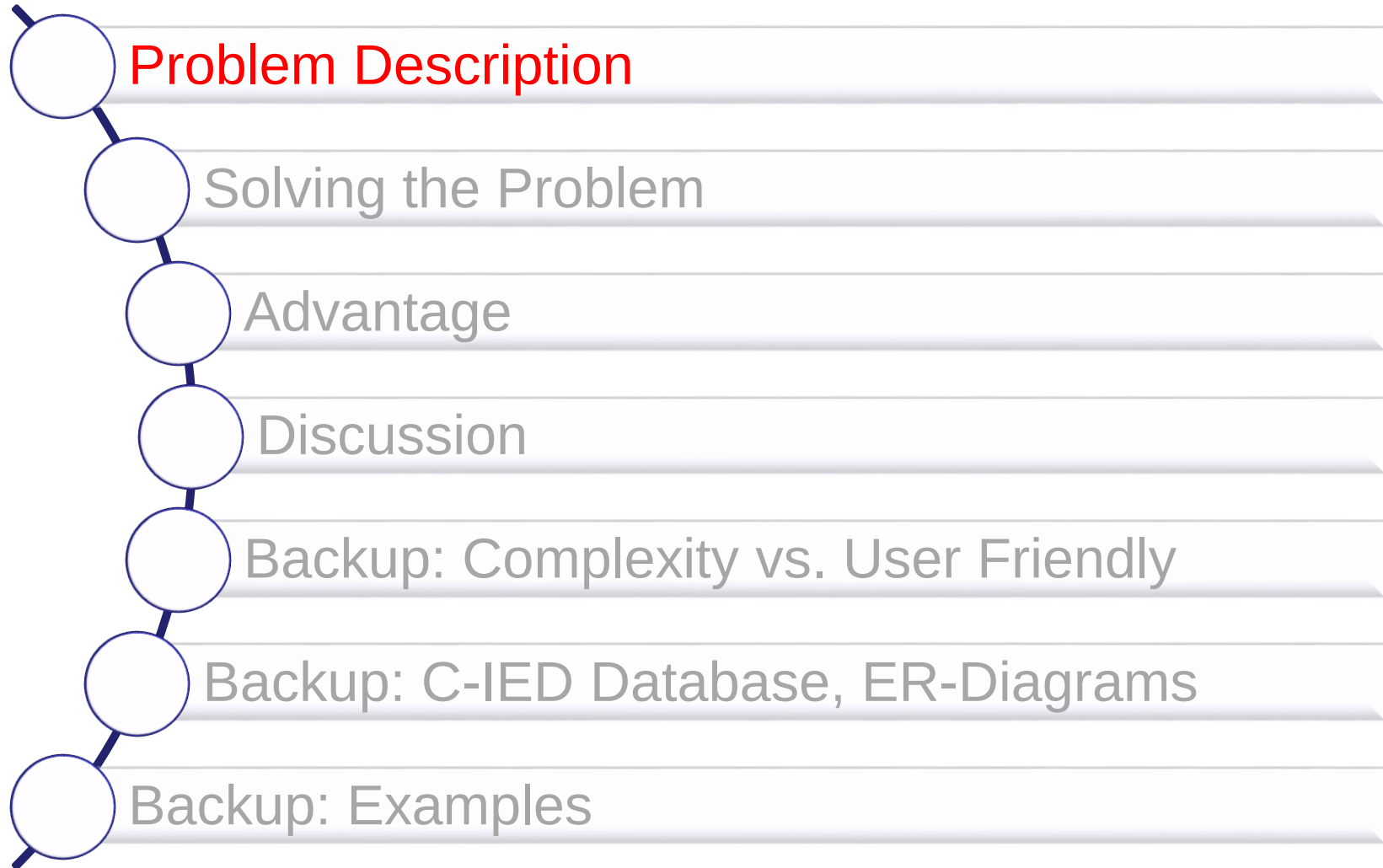
Button Line Up Front

Status of the DEU C-IED Database

- Detailed requirements were defined by the end users
 - Each module was successfully tested by the responsible users/units
 - Since 01.01.2018: Life-Testing with real mission data from MLI
 - Starting OCT 2018: Stepwise including other units that are involved in the exploitation process
 - Cooperation with NLD Defence Expertise Center Counter-IED
- Database, Workflow & User Front Ends match our requirements to 100%
- Next Milestones (development):
 - Connection between C-IED DB and ArcGIS-Server to automatically create maps
 - Connection between C-IED DB and MS Excel to automatically create diagrams



Agenda





Motivation

There are thousands of databases available, why developing a new one?

- It is not just a database, it is a complete concept
- This concept fits exactly the responsibilities and internal workflows of the C-IED community in DEU

Description of the Problem (excerpt):

- Over the years, attachments got lost or were stored several times
- Finding all relevant information to an incident was time-consuming
- Incidents were not comparable amongst different countries and/or over years
- Information domains were islands (HME, RC, TAG, etc.)
- **Result: Collecting, cleaning and enriching information reduced the time for the assessment.**
- **Assessments regarding knowledge transfer were limited**



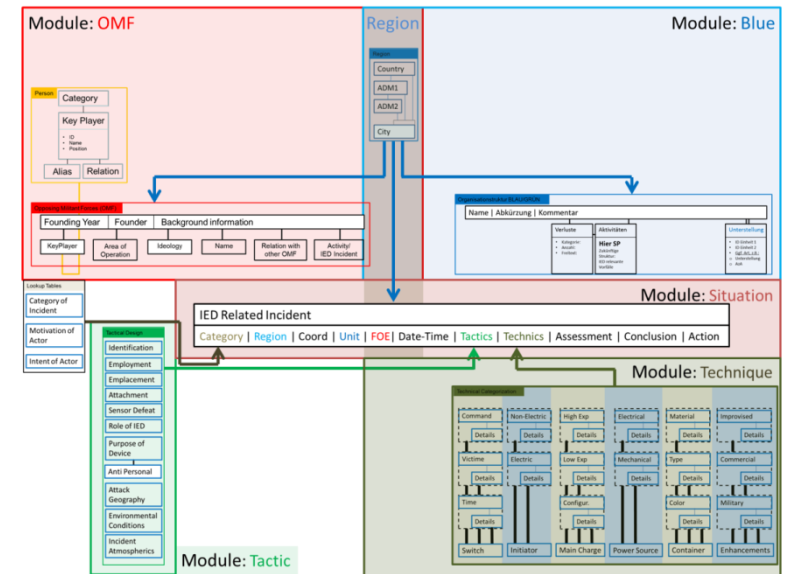
Requirements

“Must have”

- Support internal processes
- Apply quasi standard given by Technical Exploitation Lexicon
- Modular, adaptable and flexible
- Information profoundly linked
- Central workspace for all units integrated in exploitation process
- User und role concepts

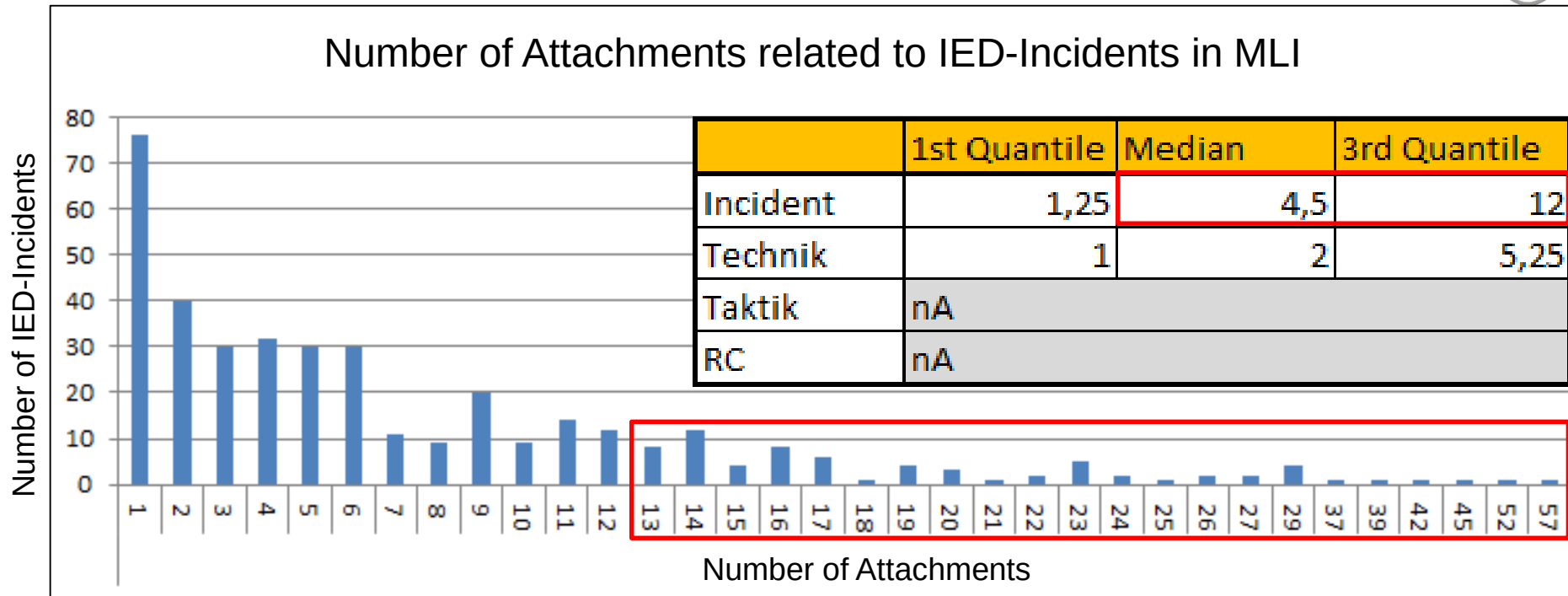
“Can”

- Synchronization with other databases
- Technical workflow





Example: Number of Attachments per IED-Incident



Of all IED-Incidents in MLI (2018):

- have 50% at least 5 attachments
- have 25% more than 12 attachments

Are you sure to have seen all related information before doing an assessment?



Example: Knowledge Transfer

- Independent of conducting Attack the Network (AtN) operations you need to understand adversary networks.
- In order to “predict” the IED-development in a region, you need to analyze the influence from other networks/groups (Knowledge transfer).
- Therefore your C-IED Analyst needs to know the relations between the different Terrorist Armed Groups (TAG).
- JNIM:

General Information	Major Attacks	Name Changes	Relations	Senior Leader
Jama'a Nusrat ul-Islam wa al-Muslimin'	Islamic State in the Greater Sahara		2018-02-23	Affiliates
Jama'a Nusrat ul-Islam wa al-Muslimin'	Al-Mourabitoun		2017-03-22	Merger
Jama'a Nusrat ul-Islam wa al-Muslimin'	Al Qaeda in the Islamic Maghreb		2017-03-03	Allies
Jama'a Nusrat ul-Islam wa al-Muslimin'	Ansar Dine		2017-03-02	Merger
Jama'a Nusrat ul-Islam wa al-Muslimin'	Macina Liberation Front		2017-03-02	Merger



Example: Knowledge Transfer

Islamic State:

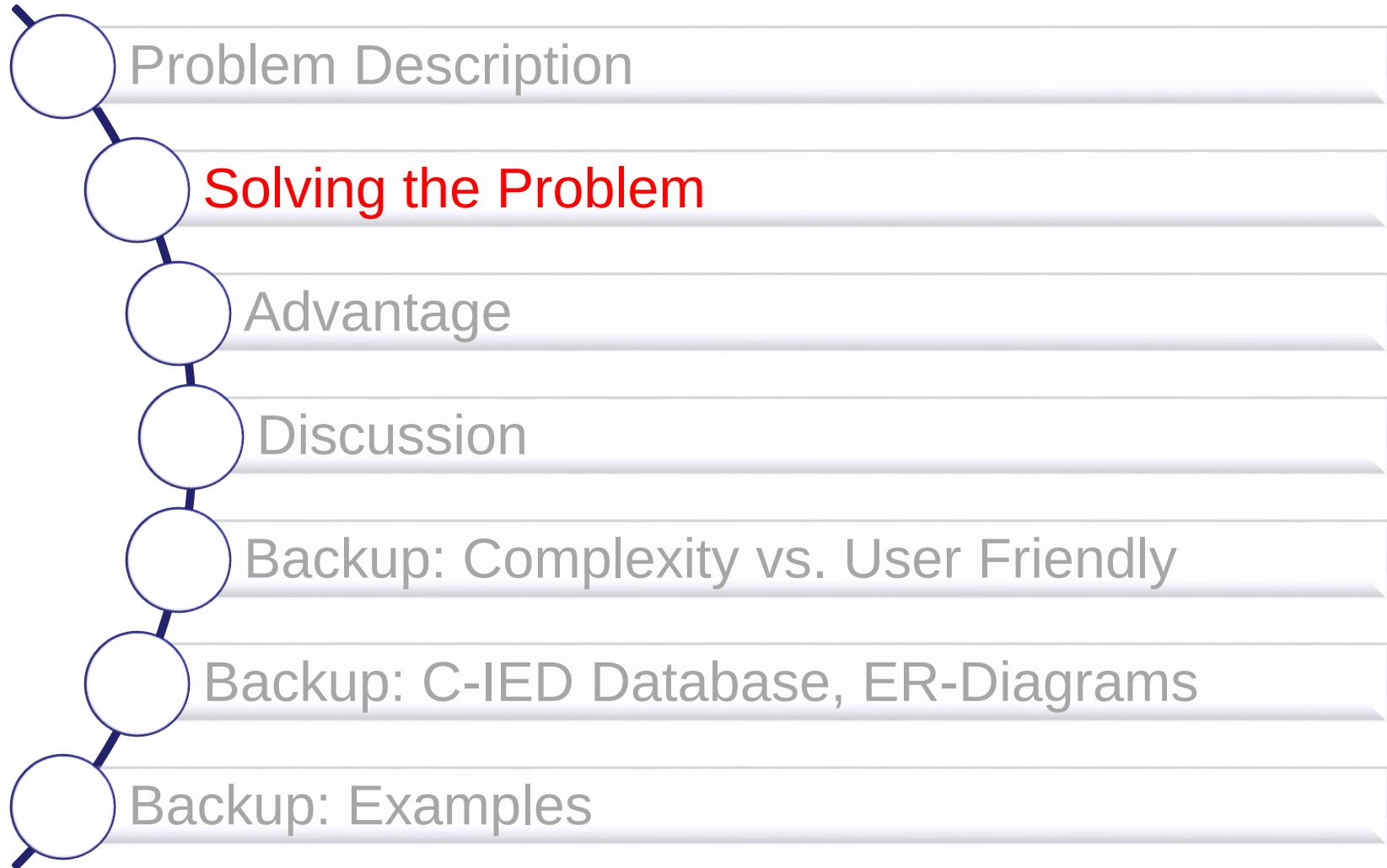
(12 of 73)

General Information	Major Attacks	Name Changes	Relations	Senior Leader
Badr Organization of Reconstruction and Development	The Islamic State		2015-06-01	Rivals
The Islamic State	The Taliban		2015-04-30	Allies
Boko Haram	The Islamic State		2015-03-07	Allies
Jaysh Rijal al-Tariqa al-Naqshbandia (JRTN)	The Islamic State		2015-01-31	Rivals
The Islamic State	Al Qaeda in the Arabian Peninsula		2014-10-31	Rivals
Jundullah	The Islamic State		2014-10-31	Affiliates
Ansar Beit al-Maqdis	The Islamic State		2014-10-31	Affiliates
Ansar al-Islam Syria	The Islamic State		2014-09-30	Rivals
The Islamic State	Tehreek-e-Taliban Pakistan		2014-09-30	Affiliates
Kata'ib Hezbollah	The Islamic State		2014-08-31	Rivals
Al Qaeda Kurdish Battalions	The Islamic State		2014-08-31	Rivals

Are you sure that your analyst considered all of them, before doing an assessment on knowledge transfer?



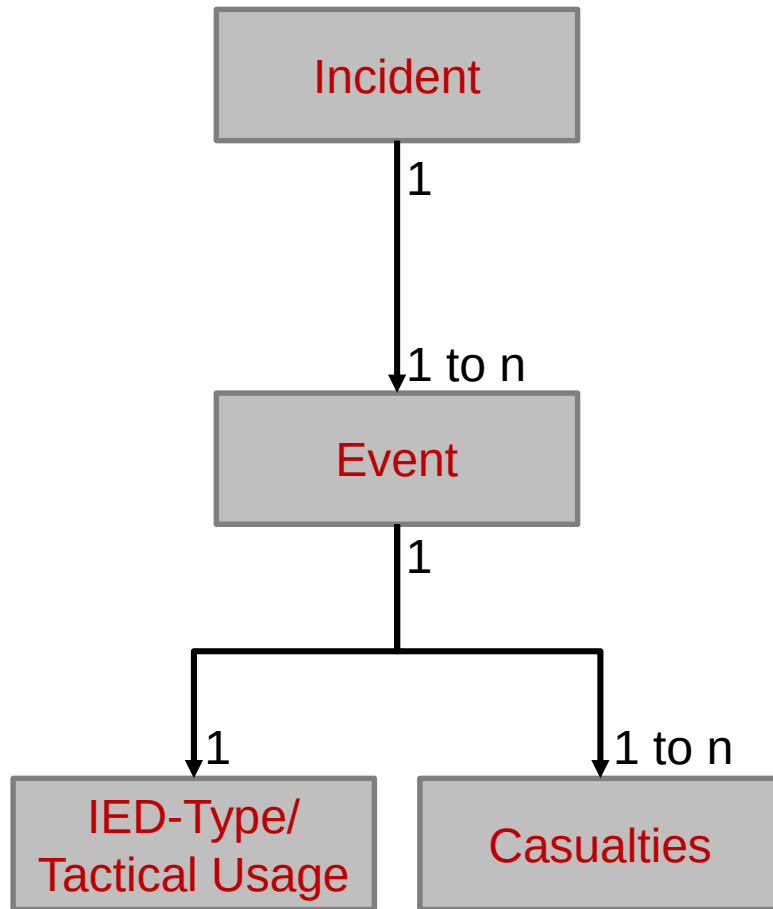
Agenda





Solution: Comparable Information

- Each Incident gets stored following the same structure



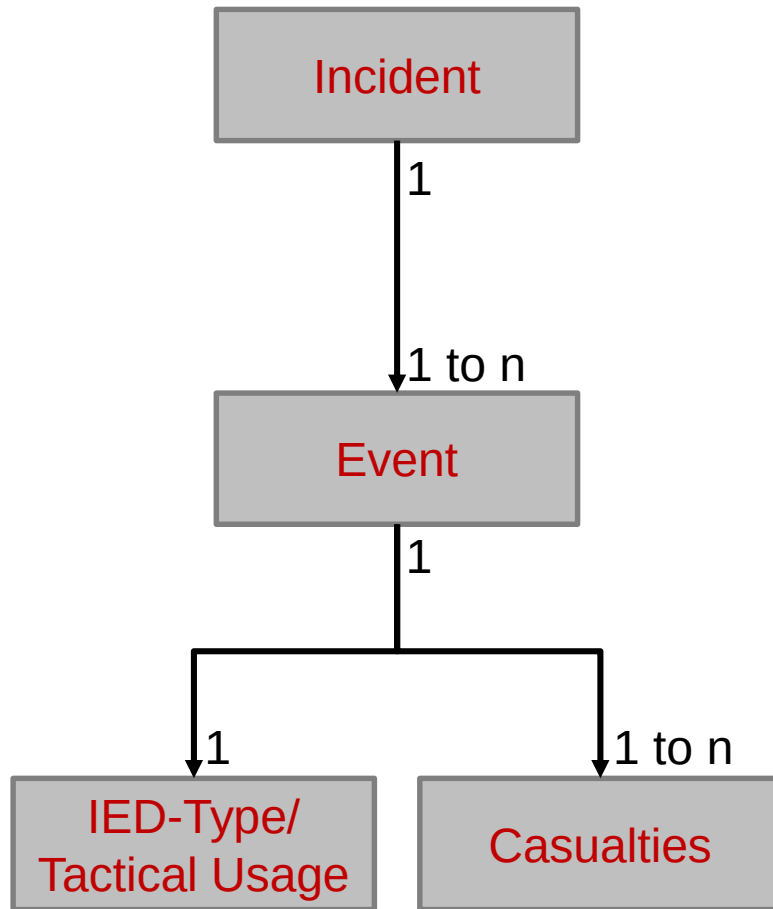
- 5W: WHERE, WHEN, WHAT, WHO, WHO
- Assessments

- Category: Explosion, Find, Cache, etc.

- Technical Categorization
- Tactical Characterization
- Casualties



Solution: Comparable Information, Example



- MLI, KOULIKORO, KTC
- 24.02.2019, 02:50z
- <Summary of the Incident>
- JNIM
- Infrastructure, Coalition Forces

Events in chronological Order

- Small Arms Fire
- Interdiction
- Explosion

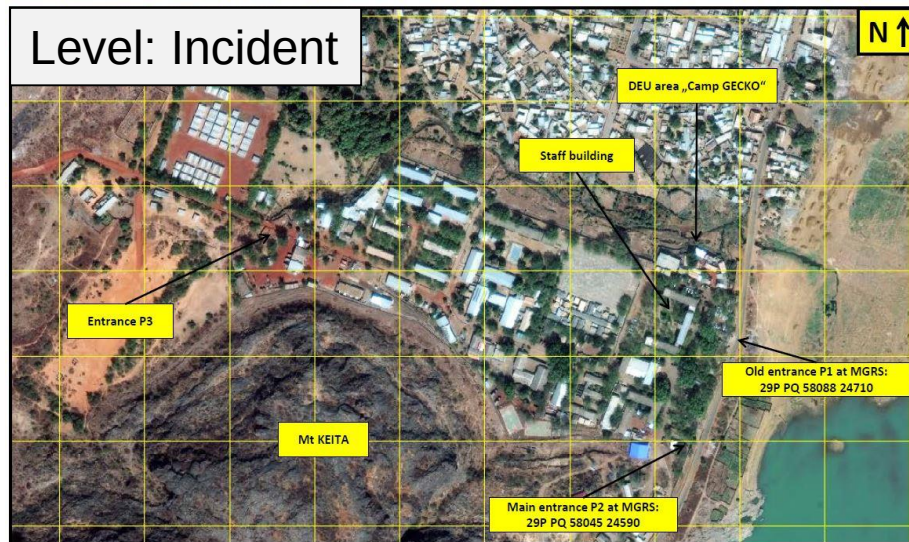
IED for each Event (Example shows Event 3)

- Switch
- Main Charge
- Secondary, Domain
- Method of Employment



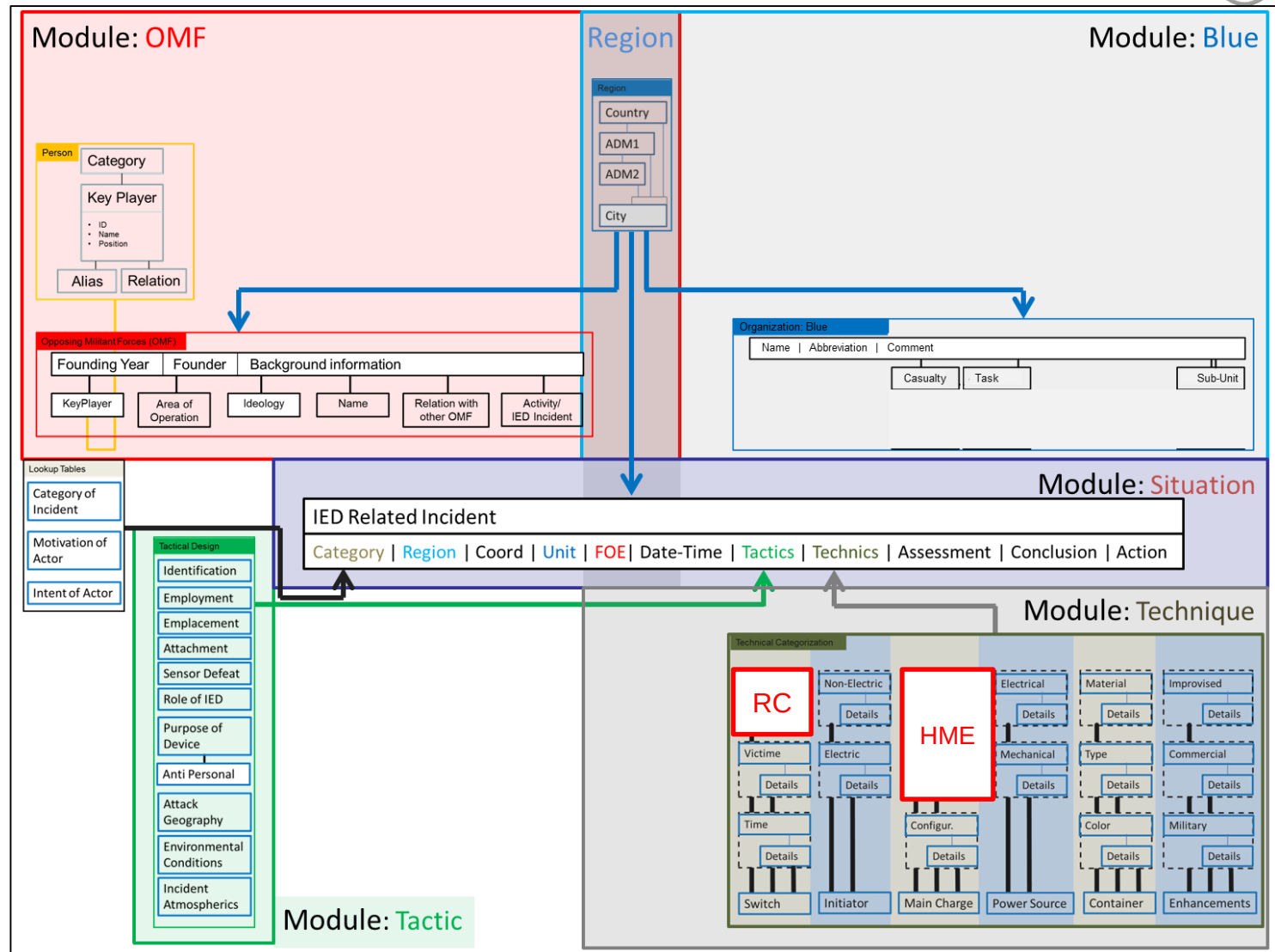
Solution: Attachments

- Attachments are organized by the database (no exception)
- Attachments are hierarchically structured:
 - Incident
 - i.e. reports, movies, maps
 - Technic
 - i.e. images of (components of) the IED
 - Tactic
 - i.e. sketch, phases of attack
 - Radio Controlled
 - signal characteristics





Solution: Avoiding Islands





Solution: Avoiding Islands

Comprehensive Approach:

- **Joint Intelligence:**
 - Every piece of information is linked
 - Every Analysts contributes directly to the complete picture
- Principle: **Need to know**
 - Access to modules follows privileges of the user/of the role
 - If a user is not allowed the access a module, the relevant content is aggregated and can be still be used i.e. as filter criteria
- **Modules:**
 - That are accessible by a very restrictive group of people
 - That are rarely used
 - That require SMEare still embedded in the structure. These are:
 - Module RED - "Terrorist Armed Groups"
 - Module HME
 - Module RC



Example: Restricted Information vs. Aggregated Data

Raw Data:

General Information	Major Attacks	Name Changes	Relations	Senior Leader	
Jama'a Nusrat ul-Islam wa al-Muslimin'	Islamic State in the Greater Sahara		2018-02-23	Affiliates	Based on the increased cooperation on a tactical mortar teams of those TAGs as a positive side effect
Jama'a Nusrat ul-Islam wa al-Muslimin'	Al-Mourabitoun		2017-03-22	Merger	JNIM is a militant jihadist and terrorist organisation. Liberation Front, Al-Mourabitoun and the Sahar after its leaders swore allegiance to Ayman al-Z
Jama'a Nusrat ul-Islam wa al-Muslimin'	Al Qaeda in the Islamic Maghreb		2017-03-03	Allies	JNIM is a militant jihadist and terrorist organisation. Liberation Front, Al-Mourabitoun and the Sahar after its leaders swore allegiance to Ayman al-Z
Jama'a Nusrat ul-Islam wa al-Muslimin'	Ansar Dine		2017-03-02	Merger	JNIM is a militant jihadist and terrorist organisation. Liberation Front, Al-Mourabitoun and the Sahar after its leaders swore allegiance to Ayman al-Z
Jama'a Nusrat ul-Islam wa al-Muslimin'	Macina Liberation Front		2017-03-02	Merger	JNIM is a militant jihadist and terrorist organisation. Liberation Front, Al-Mourabitoun and the Sahar after its leaders swore allegiance to Ayman al-Z

Aggregated Data:

Jama'a Nusrat ul-Islam wa al-Muslimin'

Merger

Type of Relation

Allies

Rivals

Split

Merger

Affiliates

Al-Mourabitoun

Ansar Dine

Macina Liberation Front (MLF)

Jama'a Nusrat ul-Islam wa al-Muslimin' or TAG with realltion: Merger



Example: Including Information of SME

Raw Data:

Switch Initiator Main Charge Power Source Container Enhancement Bearing Related

Ammonium Nitrat Fuel Oil (AnFO) 200 : 240 kg

HME Components:

- + Ammonium Nitrate, NH₄NO₃ 70 : 72 %
- + Aluminium, Al 1 : 1 %
- + Mineralöl 25 : 29 %

Contaminations:

- + Eisen, Fe 2 : 3 mg/l

Add new HME Configuration

General Information HME Specific Information

Aggregated Data:

Ammonium Nitrate

HME Component

Aluminium

Ammonium Nitrate

Bleinitrat

Calciumcarbonat

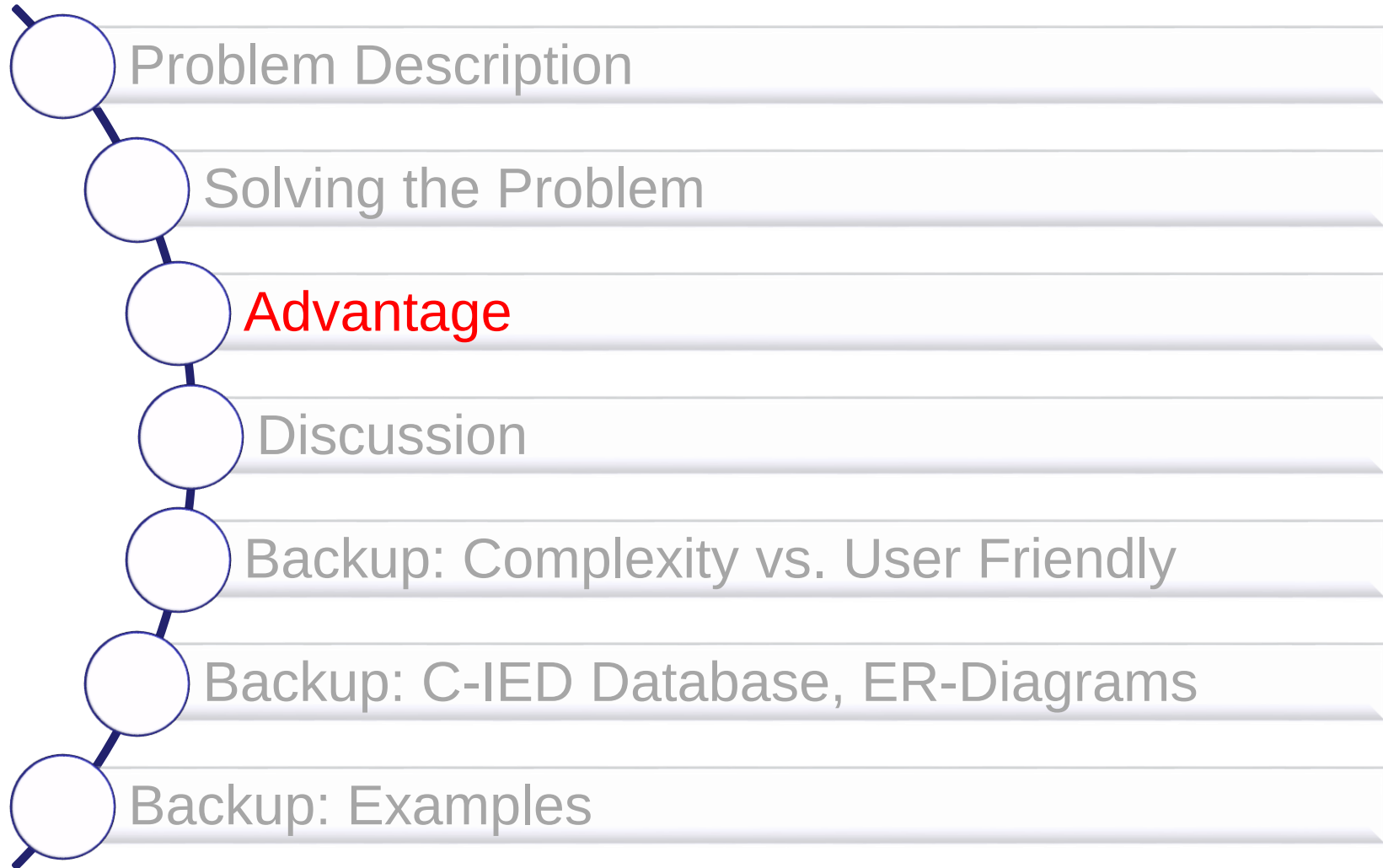
Dimethylketon

Essigsäure

Ethyl Alcohol

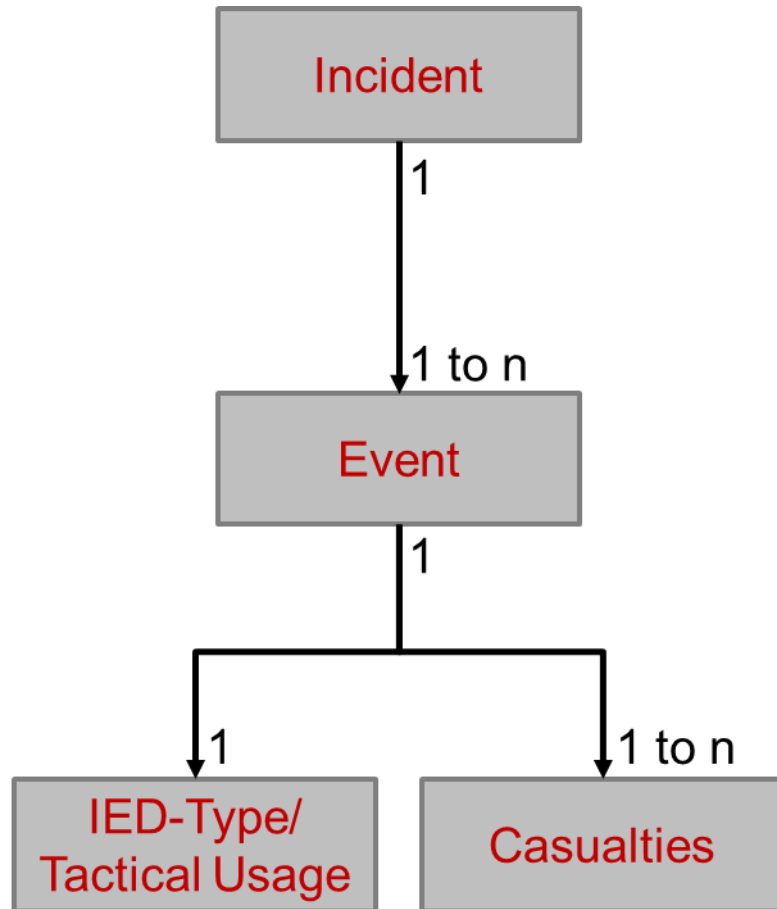


Agenda





Example: Comparable Information





Example: Comparable Information

C-IED Database, connected as 10117518

Main Assessment x INC 2019-01-15 x

Country Yemen
AOR not selected
LOC/Route not selected
ADM1 Al Jawf
ADM2 Al Maton
City (Referencing ADM1)
Selected City Al Maton (38QMC5562494492; (16,231,44,585))
IVO 0 Distance 44.584538 Direction
Lat/Lon (WGS84) 16.229801 / 44.584538 Delete
MGRS 38QMC556944

Information Workflow Attachments

Add new Event

IED-Events associated with this Incident

Event 1 (primary)

Events Categorization

Explosion Primary Event

IED Specification

Add new IED Add new CM

IED Min 1 Max 1 Link to Detailed View

Tactical Characterization Primary Land Methode of Emplacement

Casualties

Armed Forces Security Force WIA 2 KIA 1

IED-Incident:

- Event 1: Explosion
 - 1 Emplaced IED, no further information
 - 2 WIA SF
 - 1 KIA SF



Example: Comparable Information

C-IED Database, connected as 10117518

Main Assessment * INC 2019-02-24 *

Country: Mali
AOR: SOUTH
LOC/Route: not selected
ADM1: Koulikoro
ADM2: not selected
City (Referencing ADM1):
Selected City:
IVO: 0
Lat/Lon (WGS84): 12.882614 / -7.543826
MGRS: 29PPQ 57999 24602

Distance: Direction: Delete

Information Workflow Attachments

Add new Event

IED-Events associated with this Incident

Event 1 (primary)
Event 2
Event 3

Events Categorization

Explosion Primary Event

IED Specification

IED Min 1 Max 1 Link to Detailed View

Switch Firing Switch Command Operated
Main Charge High Explosive Improvised Explosives
Tactical Characterization Secondary Land

Casualties

Armed Forces	Insurgent	EUTM
Armed Forces	Coalition Force	
Civilian	National	

IED-Incident:

- Event 1: SAF
 - 0 CM/IED
 - 0 CAS
- Event 2: Interdiction
 - 1 SVBIED
 - 1x Switch
 - 2x MC (HME, Det Cord)
 - 3x Container
- Event 3: Explosion
 - 1 SVBIED
 - 1x Switch
 - 2x MC (HME, Det Cord)
 - 3x Container
 - 2x KIA INS
 - 3x WIA CF
 - 1x Killed CIV



Example: Comparable Information

C-IED Database, connected as 10117518

Main Assessment x INC 2018-04-14 x

Country: Mali
AOR: WEST
LOC/Route: not selected
ADM1: Tombouctou
ADM2: not selected
City (Referencing ADM1): Tombouctou (30QVD9940454162; (16,770,-3,006))
Selected City: Tombouctou (30QVD9940454162; (16,770,-3,006))
IVO: 0
Lat/Lon (WGS84): 16.723919 / -2.997476
MGRS: 30QWD 00269 49014

Distance: 0 Direction: 0

Information Workflow Attachments

WHEN: 14.04.2018
WHO attack: Jama'a Nus
WHO/WHAT: Infrastructure
Armed Force: Armed Forces of Mali
Coalition Force: Coalition Forces
Specific Kind: Specific Kind

Add new Event

IED-Events associated with this Incident

Event 1 (primary)
Event 2
Event 3
Event 4
Event 5
Event 6
Event 7
Event 8

Events Categorization

Interdiction Primary Event

IED Specification

IED Min 6 Max 6 Link to Detailed View

Switch	Firing Switch	Command Operated
Initiator	Electric	Commercial Initiator
Main Charge	High Explosive	Improvised Explosive
Main Charge	High Explosive	Commercial Explosive
Power Source	Electrical Energy	Direct Current
Container	Confinement	Material

Casualties

IED-Incident:

- Event 1: IDF
 - 1x MC (CM, Mortar Munitions)
- Event 2: Interdiction
 - 6x SPBIED
- Event 3: Explosion
 - 1x SPBIED
- Event 4: Explosion
 - 1x SVBIED
- Event 5: Explosion
 - 1x SVBIED
- Event 6: Explosion
 - 1x SVBIED
- Event 7: Interdiction
 - 1x Projected IED
- Event 8: SAF



Advantage of this Approach

Filling the data:

- Allows filling an incident as it happened
- Supports Military Principles
 - From basic to details
 - From simple to advanced
- Forces the user to structure the data
- Enforces the quasi standard (TEL)
- Enables parallel working/working together

Assessment:

- Everybody has (theoretically) exactly the same information
- Allows filtering the list of incidents by all criteria at the same time
- Example: Incidents
 - were IS or TAG allied to IS claimed responsibility,
 - with at least <#> KIA or <#> WIA,
 - that used an IED that:
 - was RC-armed, with VO firing switch,
 - and used HME made of Ammonium that was contaminated with Silicium.



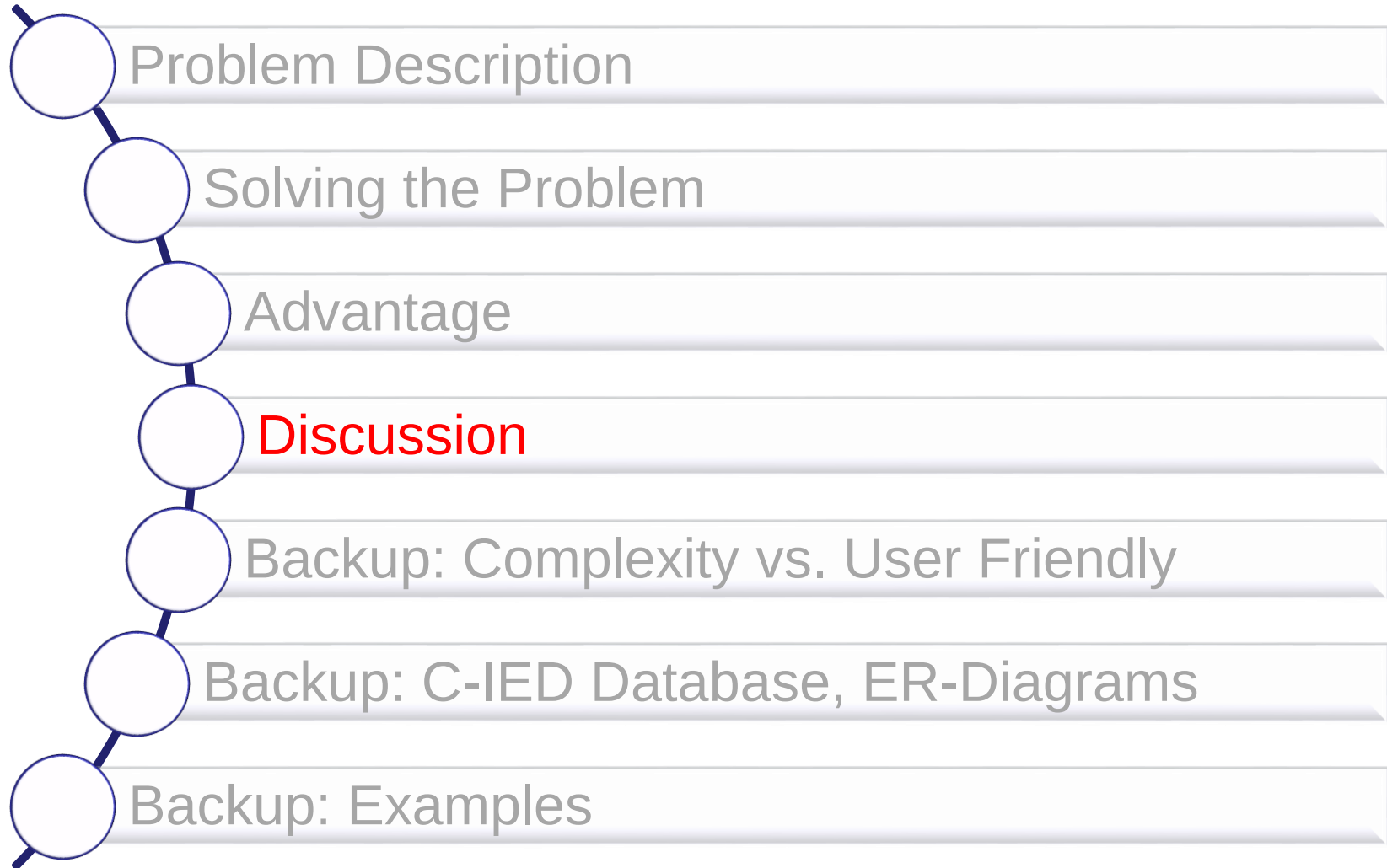
Advantage of this Approach

Data Perspective:

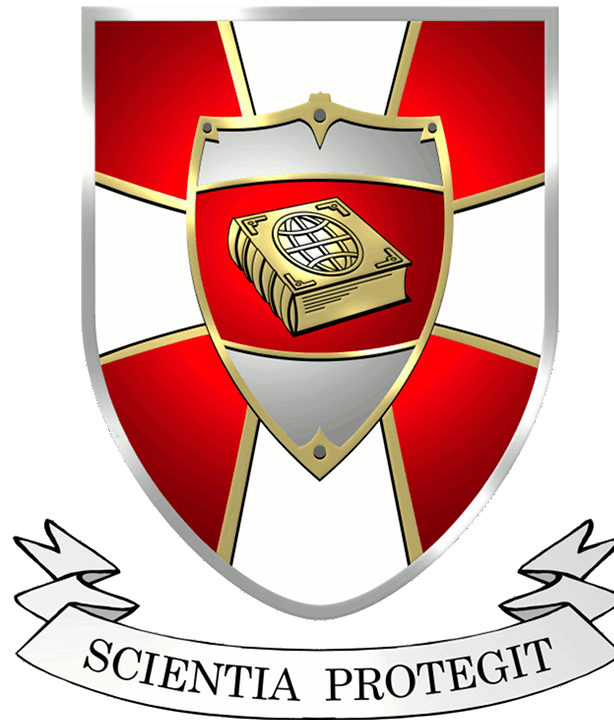
- Centralized data with centrally organized attachments/related documents
- Real Backup
- Performance: Filter that require a high performance are executed with resources of the database (124 GByte RAM of Server vs. 3 GByte RAM of workstation)
- Supports the standard given by Technical Exploitation Lexicon
- Modular structure allows assigning responsibilities
- Supports our internal exploitation workflow
- Accessing the information can still be limited by privileges
- **Most important: all information is linked, there is no isolated information!**



Agenda



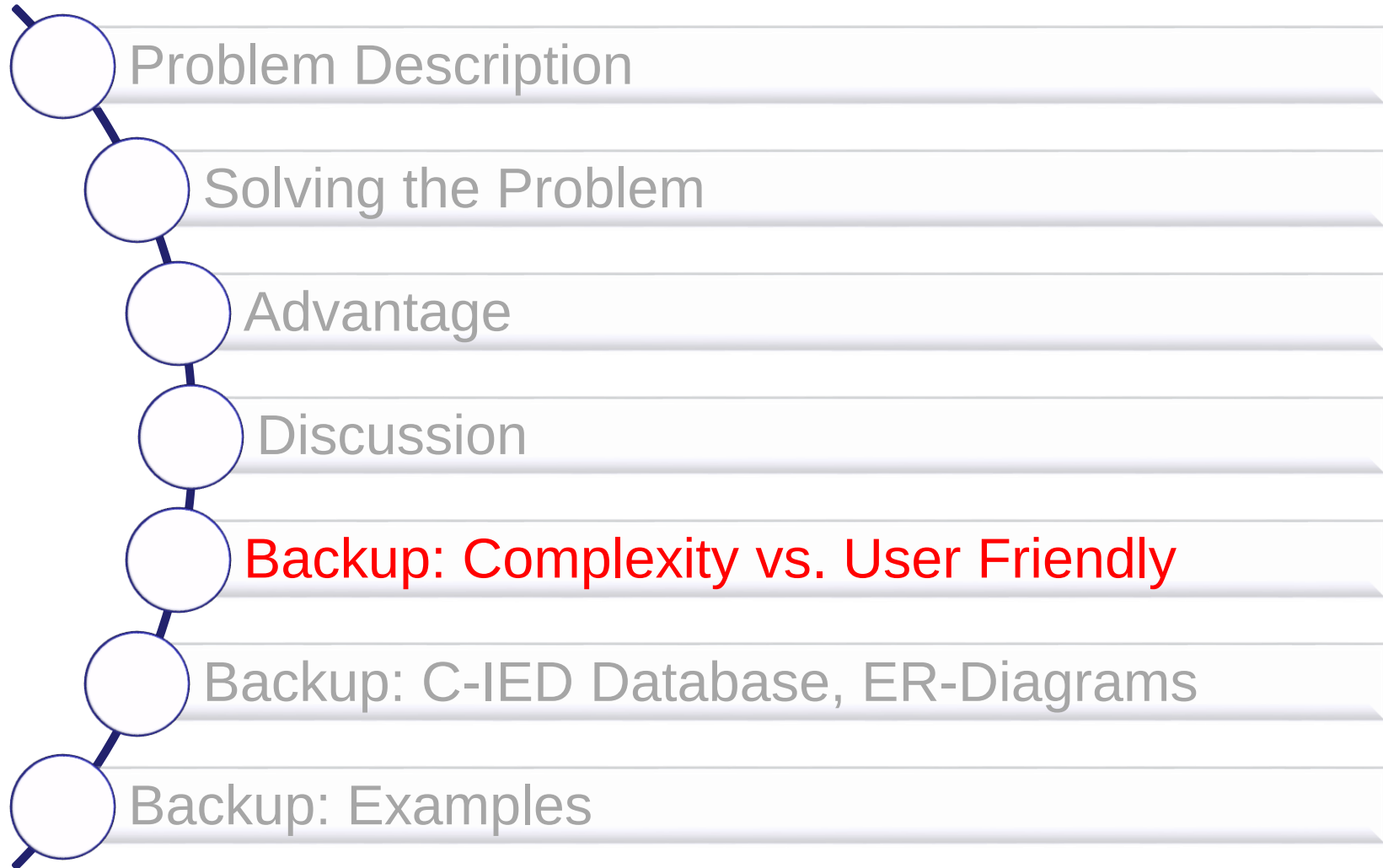
BwJFOCOM C-IED Centre



National C-IED Database



Agenda

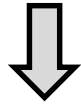




Implementing a Database „abstract“

User Requirements

Adaptable,
Modular,
Highly linked



Info-space



Architecture of
data base



Exploitation
process



Data-
model



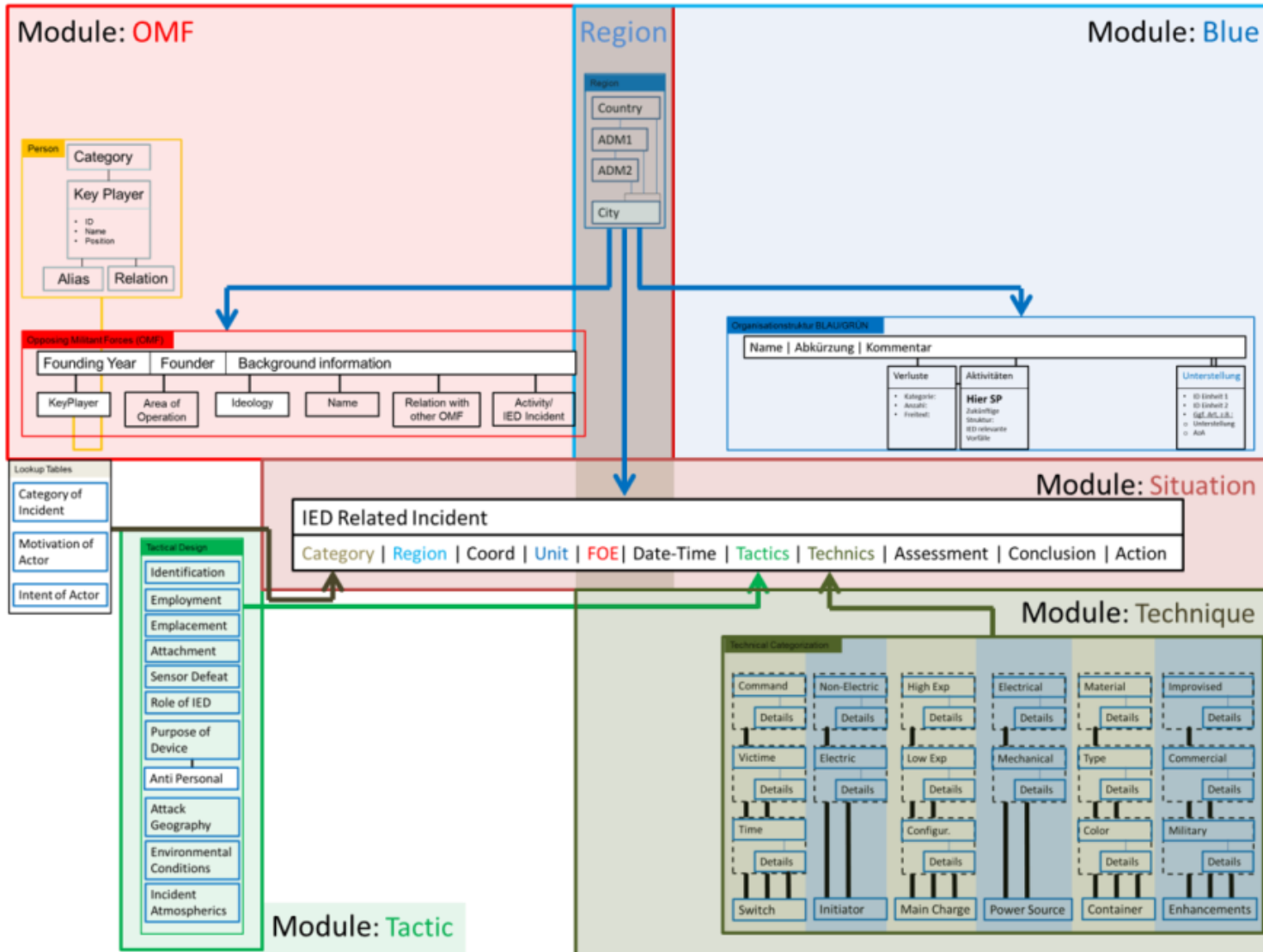
„Standard“
Assessments



Data-
model*

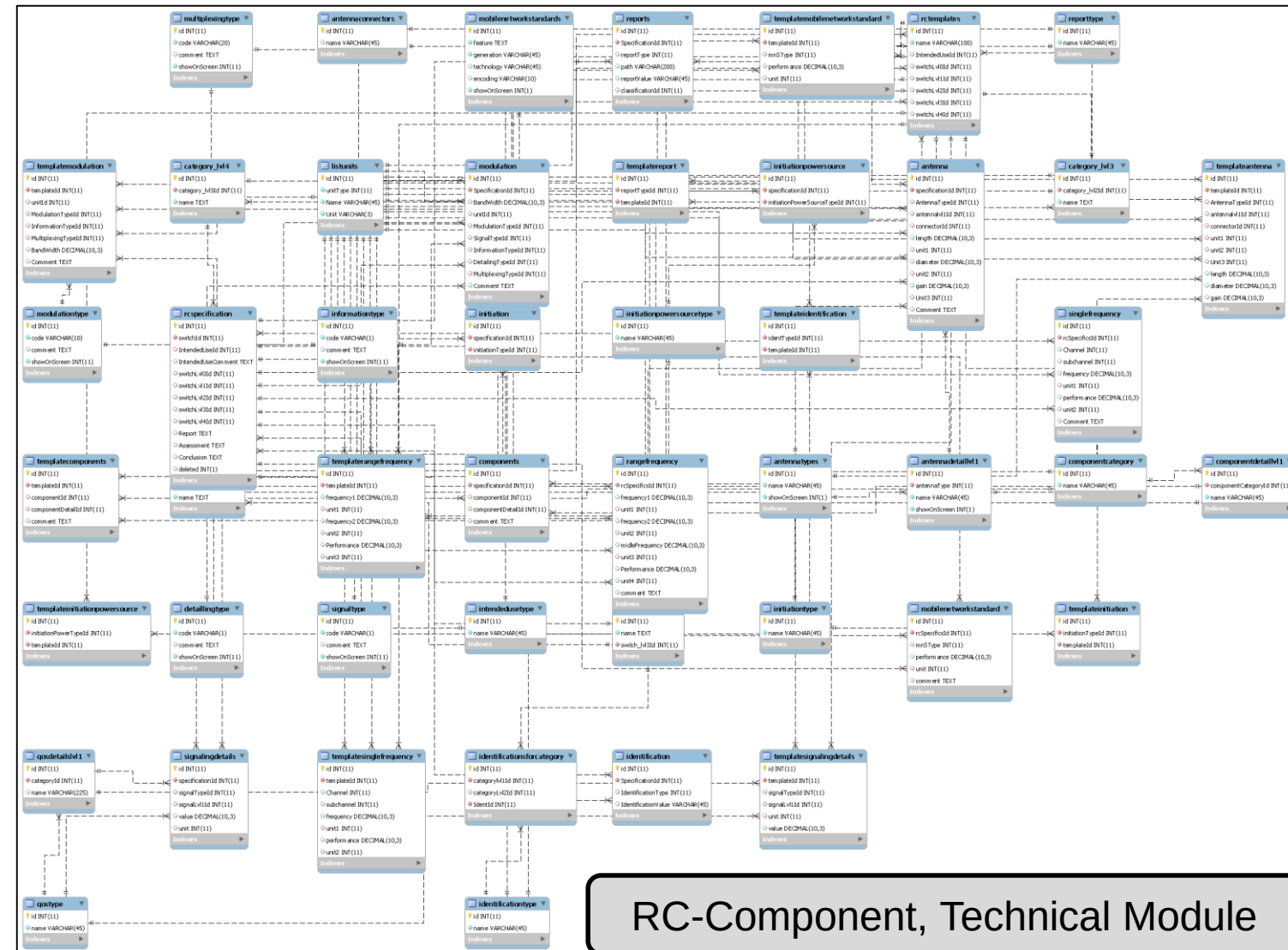


Optimized Data Model „abstract“





Optimized Data Model „real“

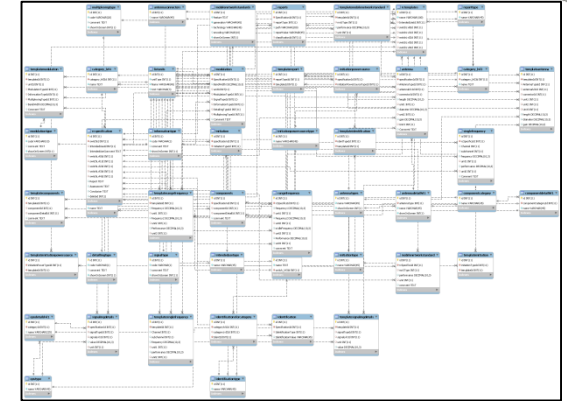


RC-Component, Technical Module

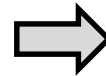


Optimized Data Model „real“

The main disadvantage of a relational model is the direct result of a main advantage: „Elimination of redundancies“



Name	Lat (WGS84)	Lon (WGS 84)
Brüssel	50.833.333	4.333.333
Brussels	Redundancy	
Bruxelles		



Stadt	Lat (WGS84)	Lon (WGS 84)
1	50.833.333	4.333.333

1
+

ID	Name
1	Brüssel
1	Brussels
1	Bruxelles

```
SELECT * FROM georeferences.city c
left join georeferences.cityname cn on cn.cityId=c.id
where c.id=100185;
```



Need for intuitive User Interfaces

```
SELECT * FROM georeferences.city c
left join georeferences.cityname cn on cn.cityId=c.id
where c.id=100185;
```

In theory, everybody can directly work at database level; BUT:

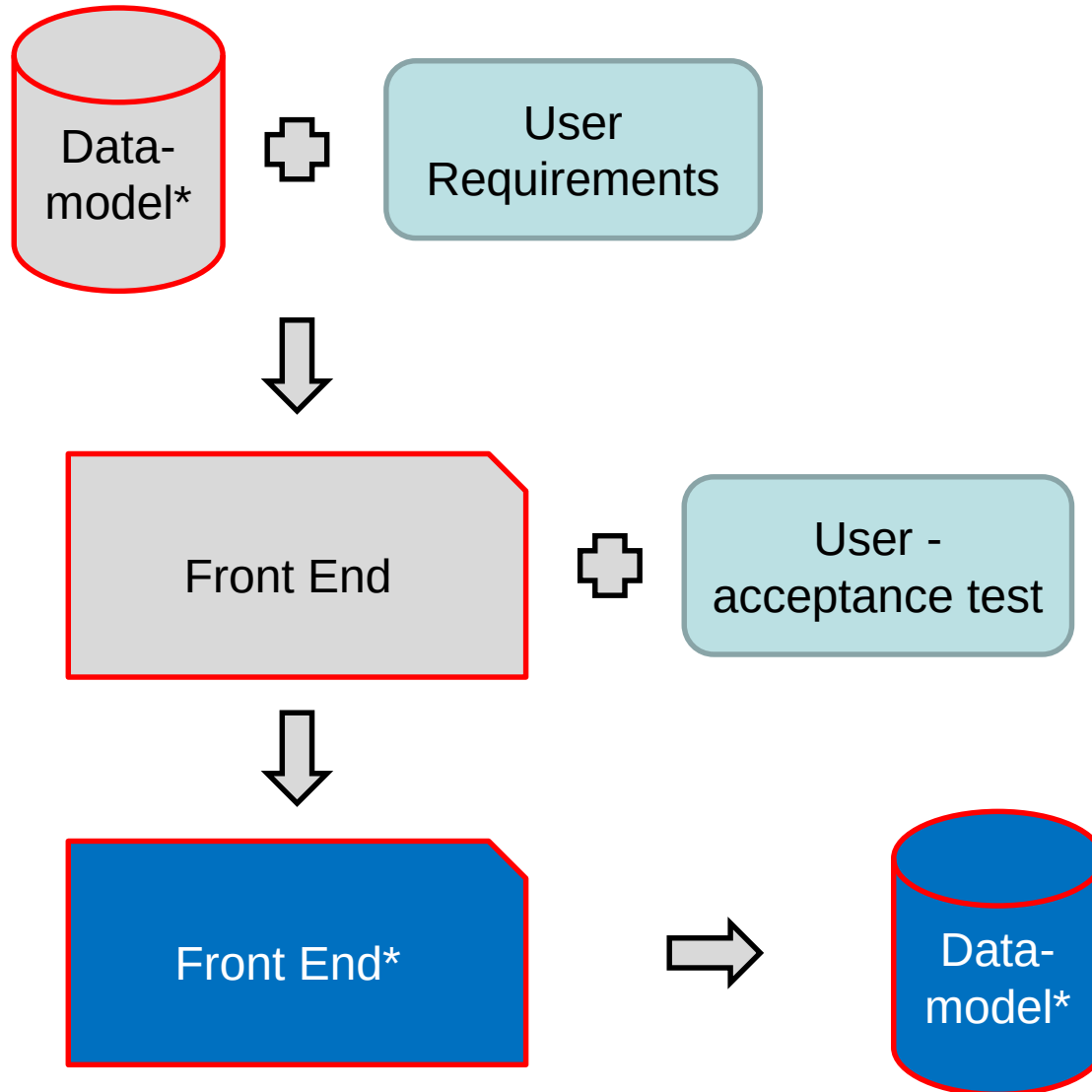
```
SELECT i.date, c.name, a1.namewithoutSpecialCharacters, a2.englishName, cn.fullnameND,
GROUP_CONCAT(DISTINCT cl.name) AS Categories, t0.shortcut, i.Summary,
ifnull(GROUP_CONCAT(DISTINCT lvl1.shortcut),""),
ifnull(GROUP_CONCAT(DISTINCT lvl2.shortcut),""),
ifnull(GROUP_CONCAT(DISTINCT blvl1.shortcut),""),
ifnull(i.ComplexAttack,""),
ifnull(GROUP_CONCAT(DISTINCT blvl2.name),""),
i.id
FROM iedincident.incident i
LEFT JOIN georeferences.country c ON i.countryId=c.id
LEFT JOIN georeferences.adm1 a1 ON i.adm1Id=a1.id
LEFT JOIN georeferences.adm2 a2 ON i.adm2Id=a2.id
LEFT JOIN georeferences.cityName cn ON i.citynameId=cn.id
LEFT JOIN iedincident.event e ON i.id=e.incidentId
LEFT JOIN iedschema.iedtypes ied ON e.id=ied.usedAtEvent
LEFT JOIN iedschema.switch switch ON ied.id=switch.iedid
LEFT JOIN iedschema.switch_detail_lvl2 lvl2 ON switch.switchlvl2Id=lvl2.id
LEFT JOIN iedschema.maincharge charge ON ied.id=charge.iedid
LEFT JOIN iedschema.mainchargedetail_lvl1 lvl1 ON charge.mainchargelvl1Id=lvl1.id
LEFT JOIN tacticaldesign.bearing bearing ON ied.id=bearing.relatedIED
LEFT JOIN tacticaldesign.bearing_lvl1 blvl1 ON bearing.bearinglvl1Id=blvl1.id
LEFT JOIN tacticaldesign.bearing_lvl2 blvl2 ON bearing.bearinglvl2Id=blvl2.id
LEFT JOIN iedincident.categories c1 ON c1.id=e.categoryId
LEFT JOIN iedincident.target t0 ON i.targetId=t0.id
```

16 Tables!

This „disadvantage“ is the direct result of a main advantage: „Elimination of redundancies“.

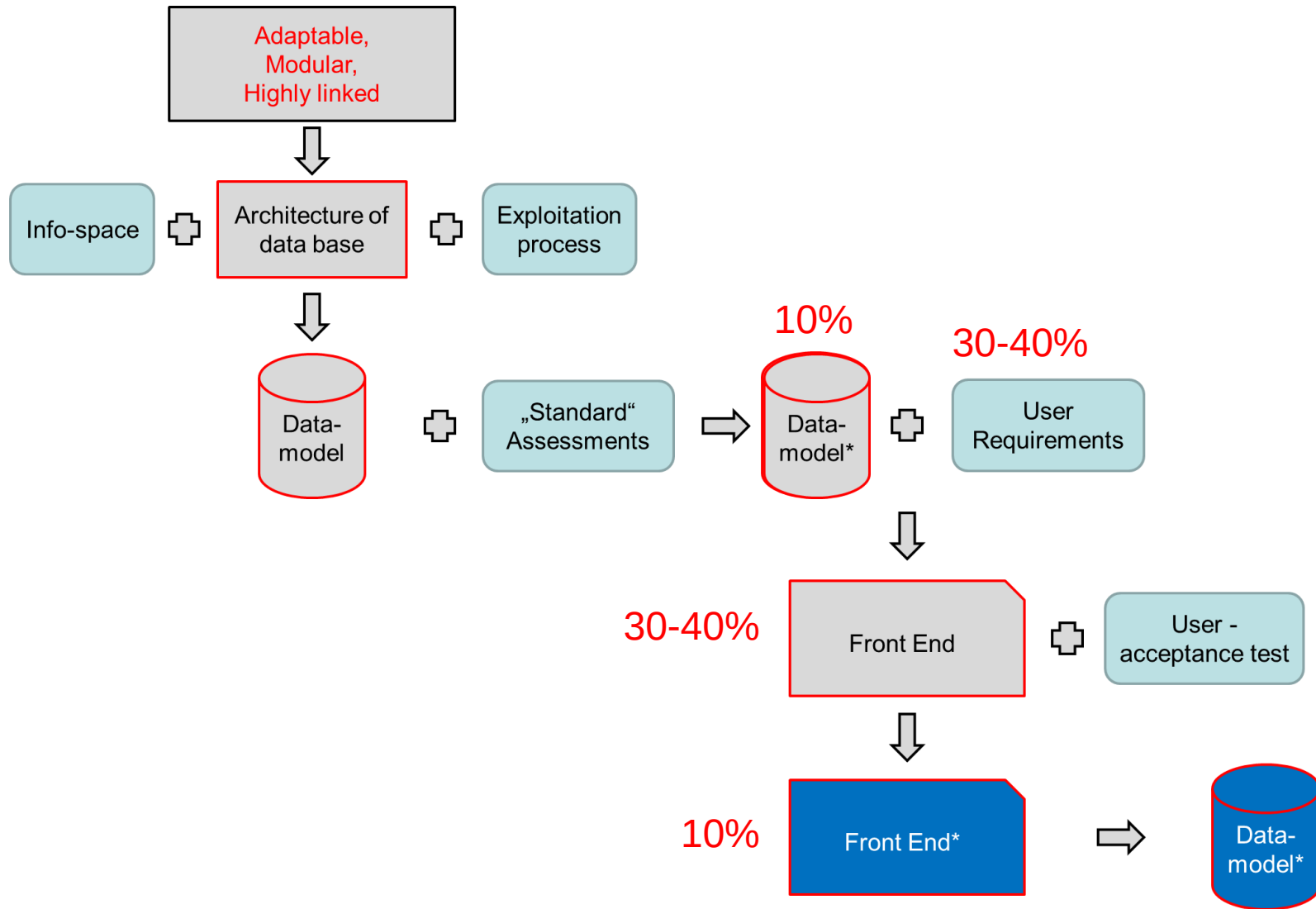


Implementation of User Interfaces



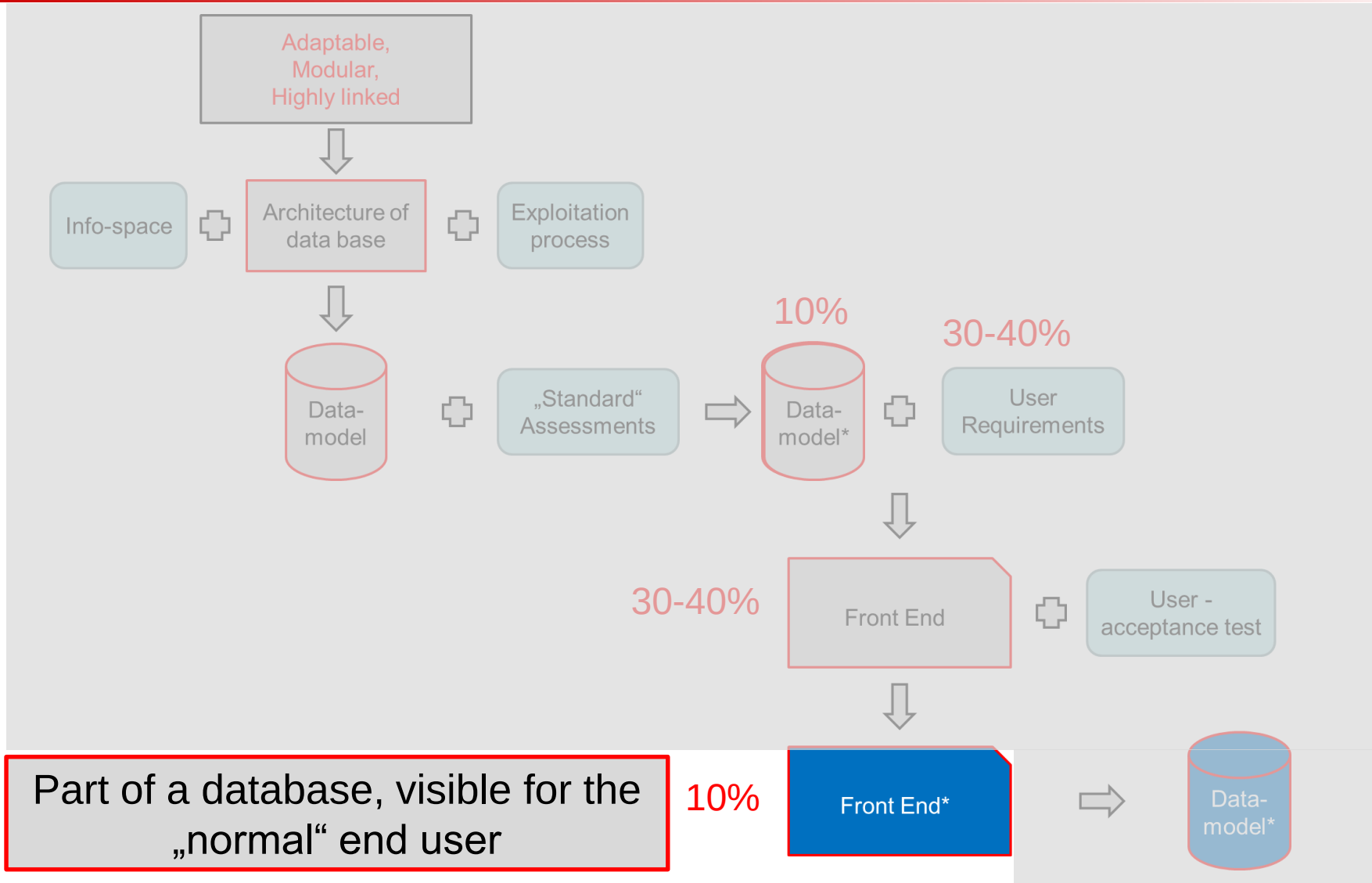


Complete Process: Requirements → DB & Front End



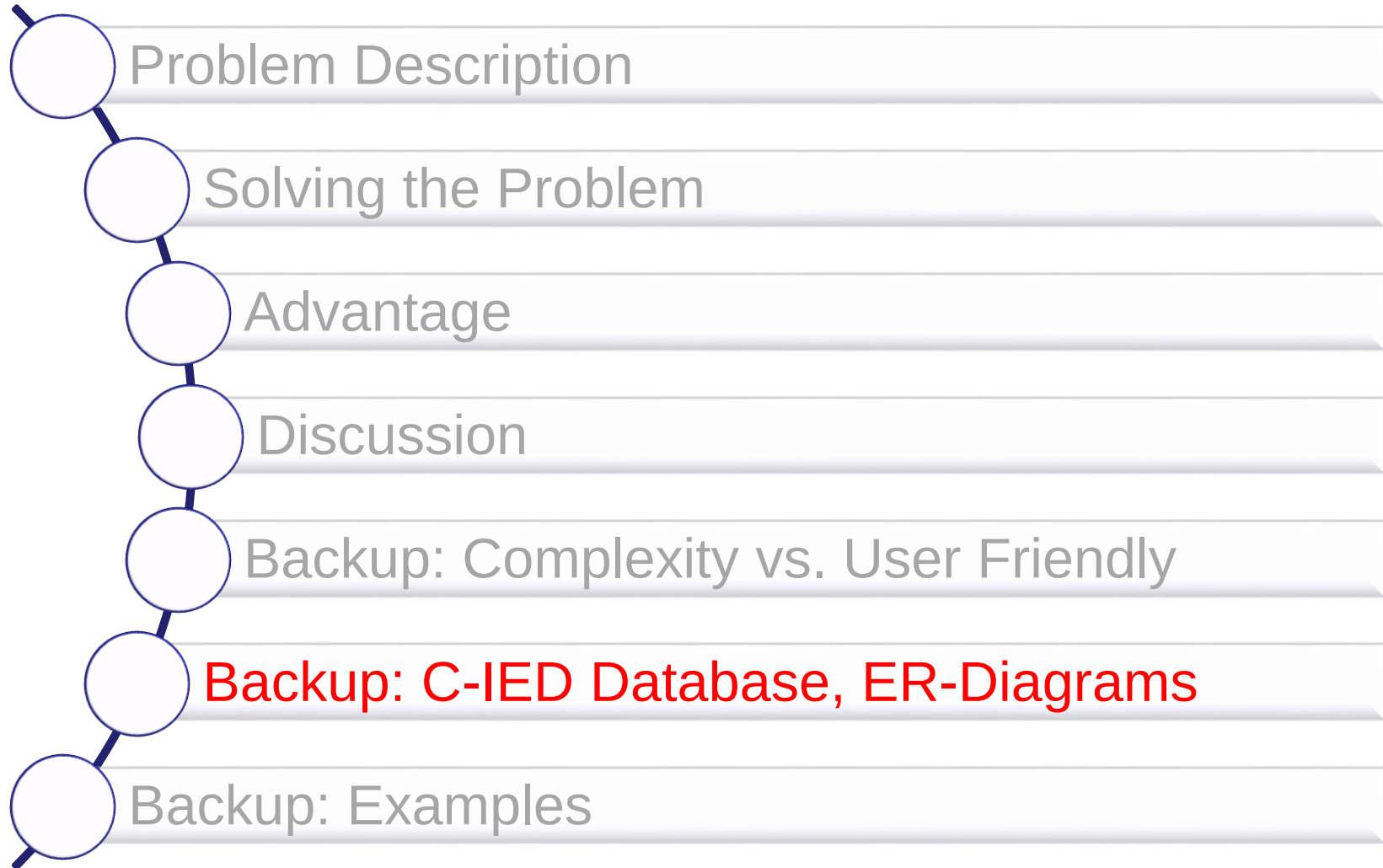


Complete Process: Requirements → DB & Front End



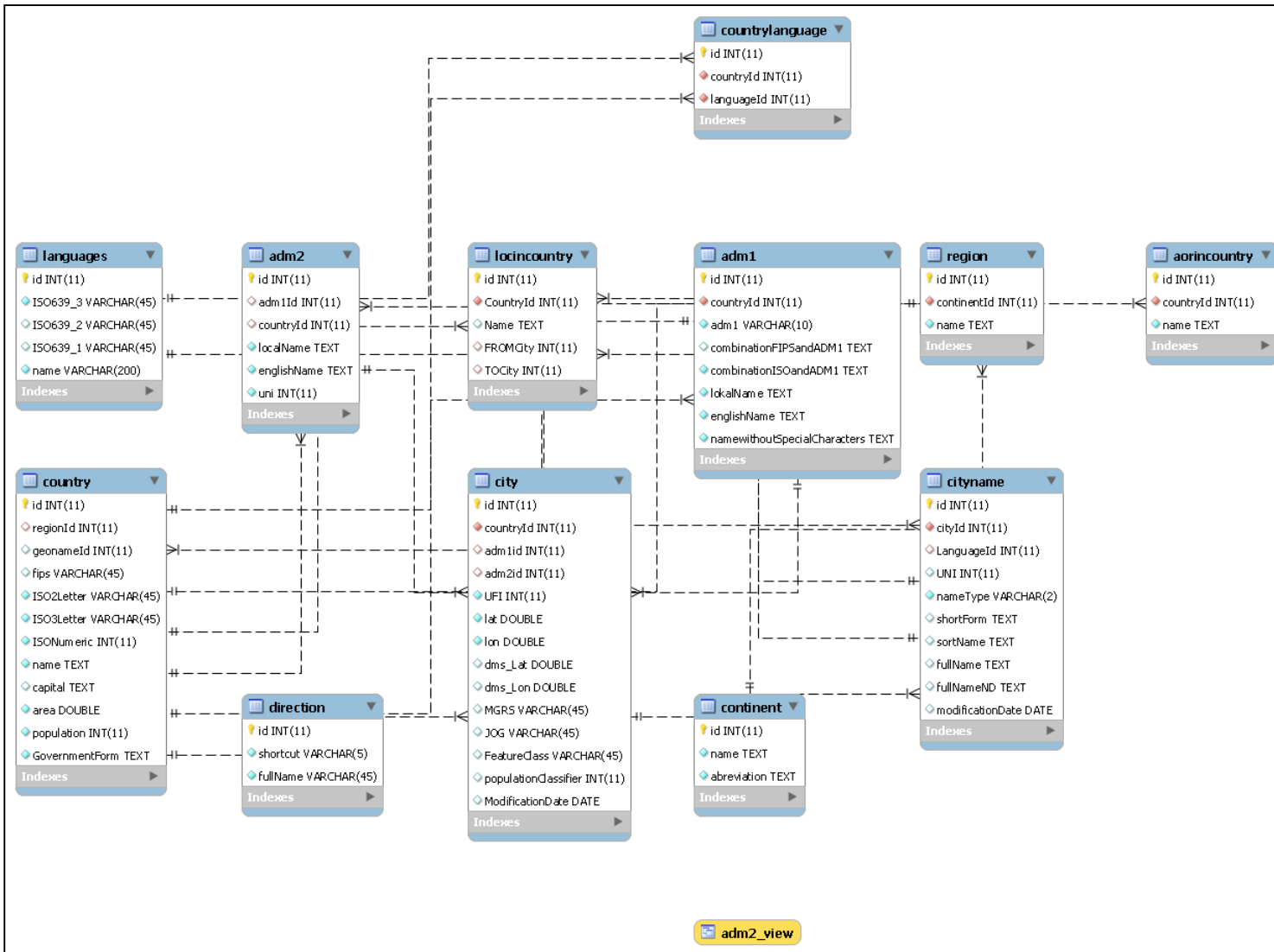


Agenda



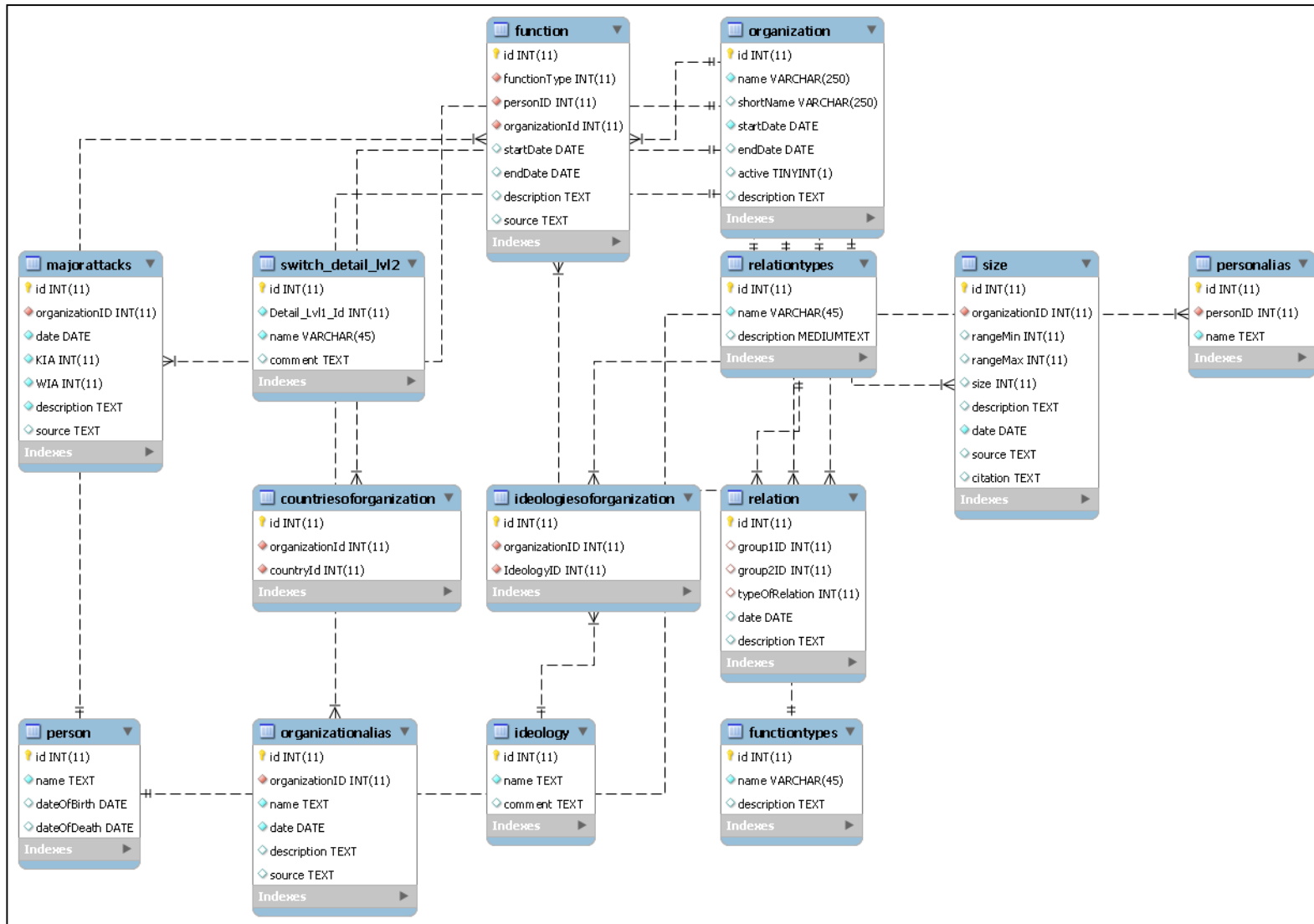


Module Region



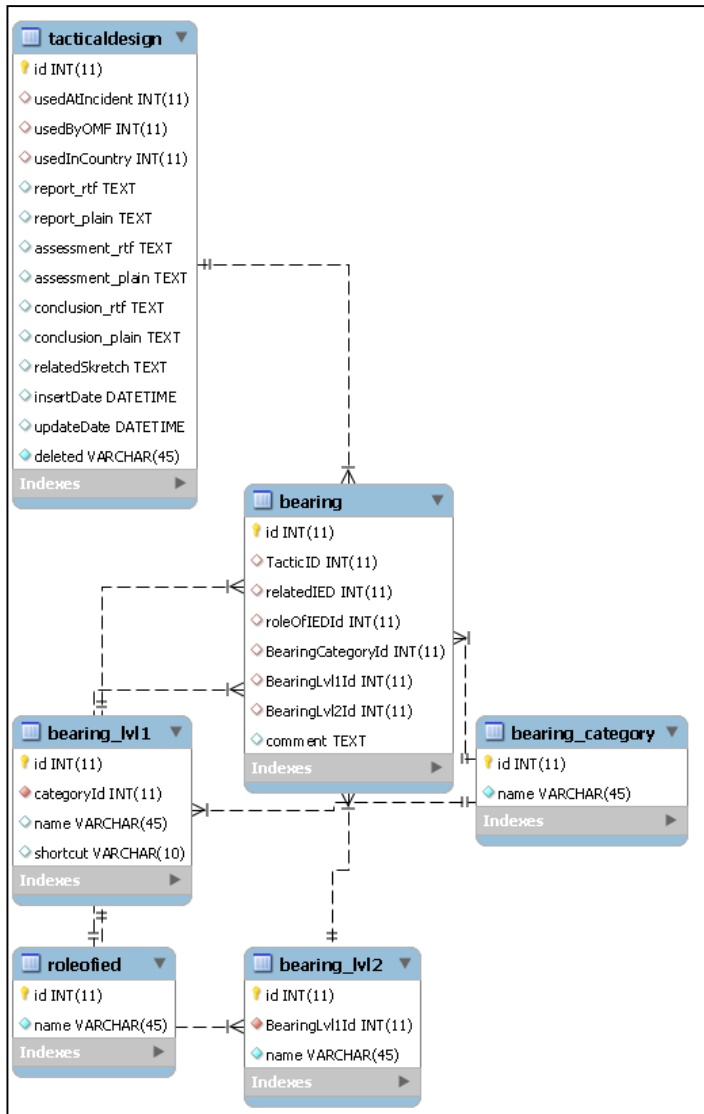


Module RED



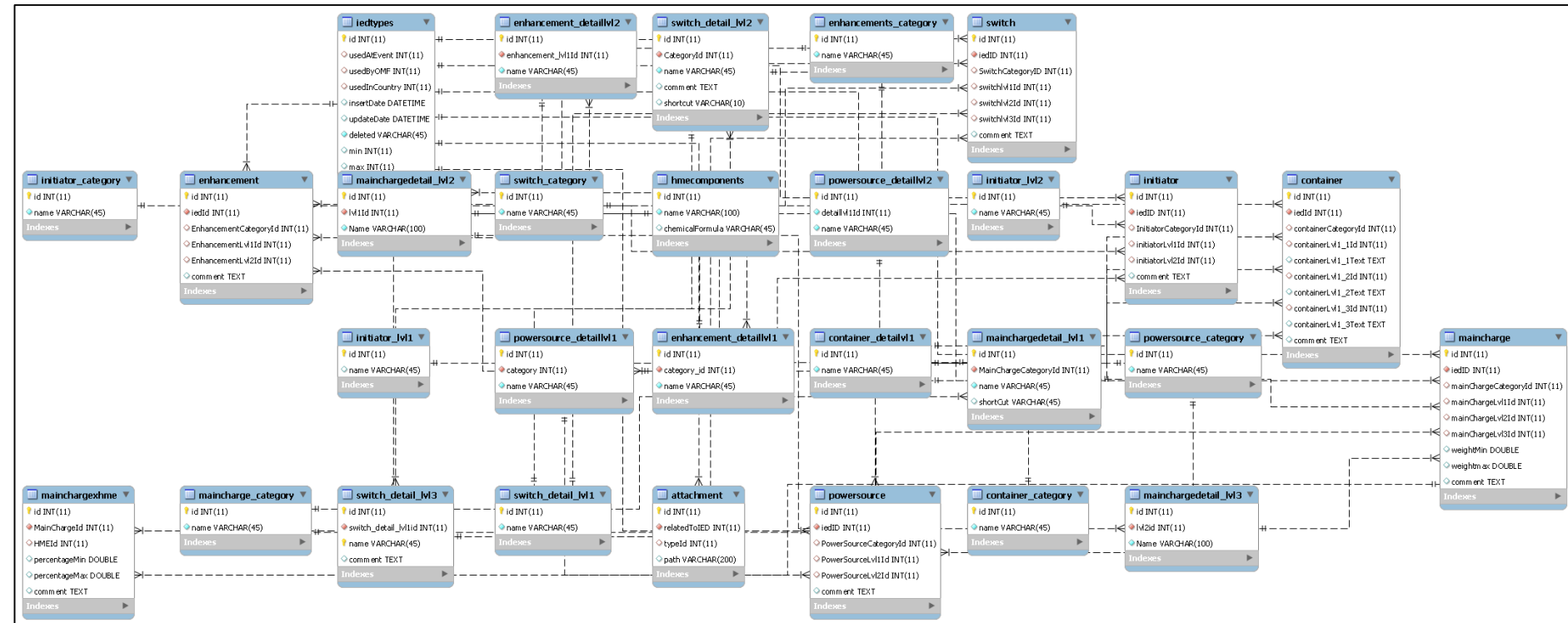


Module Tactic



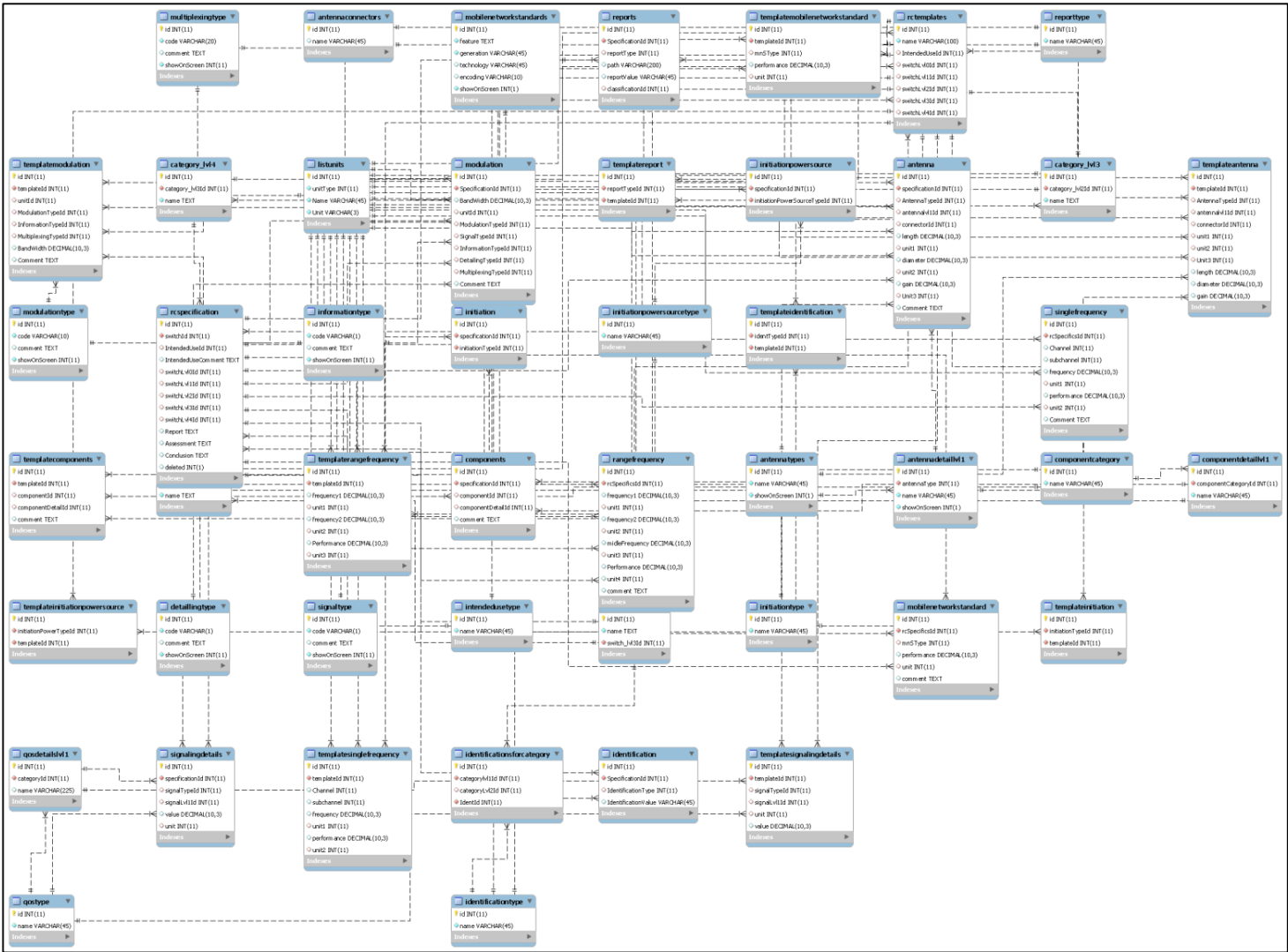


Module Technic





Module RC





Module IED-Incident

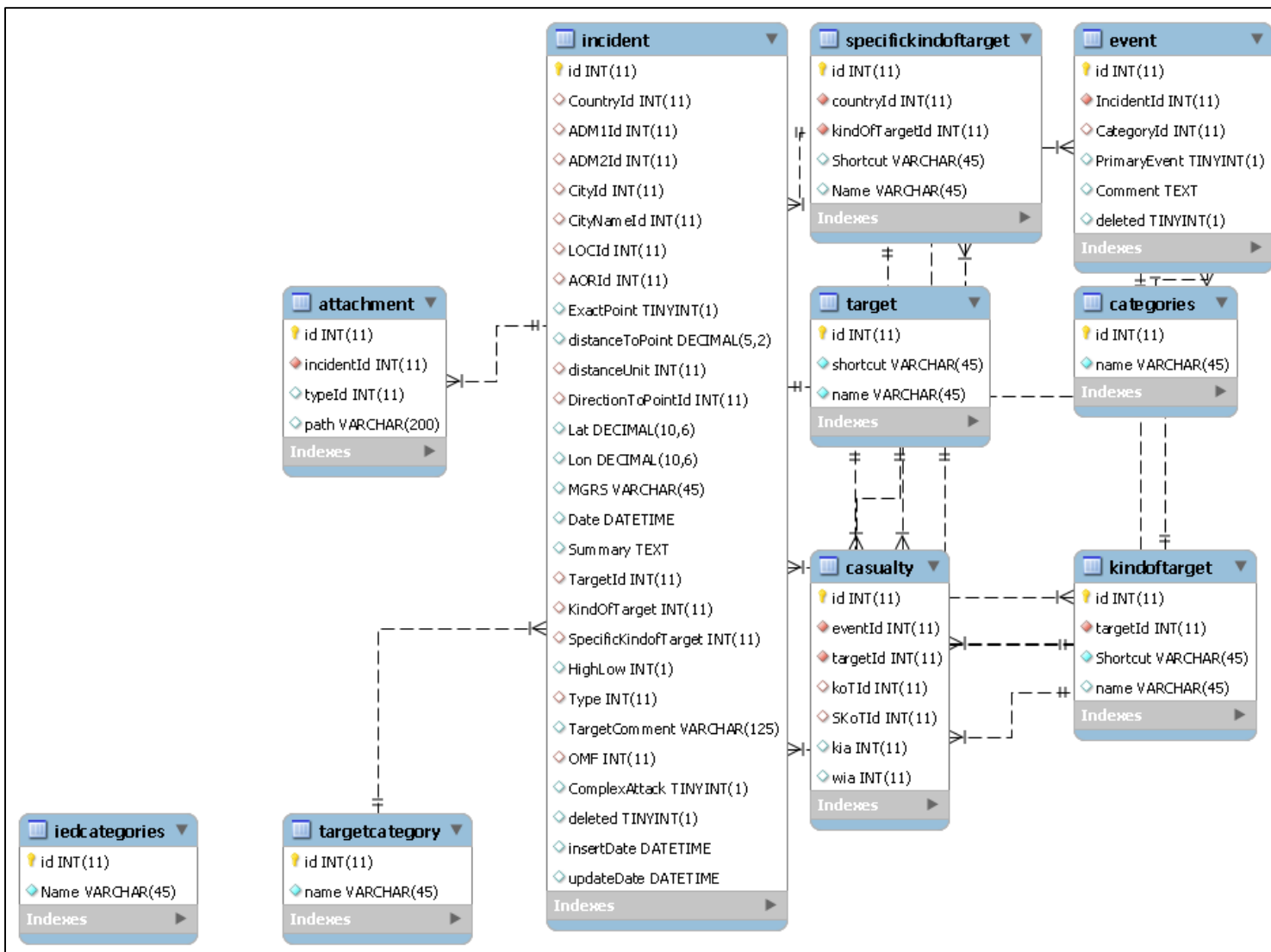


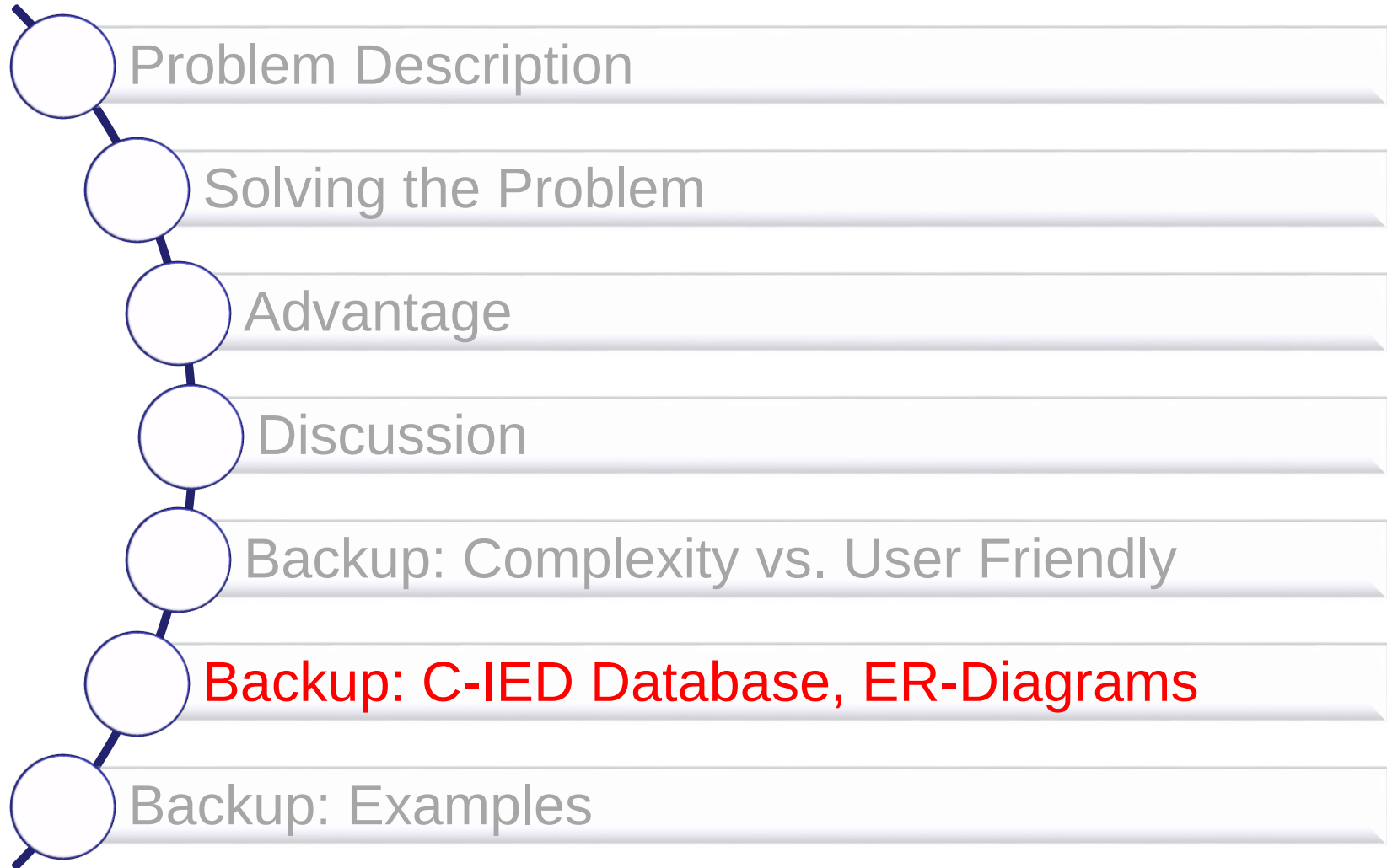


Table COUNTRY

```
CREATE TABLE `country` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `regionId` int(11) DEFAULT NULL,  
  `geonameId` int(11) DEFAULT NULL,  
  `fips` varchar(45) DEFAULT NULL,  
  `ISO2Letter` varchar(45) NOT NULL,  
  `ISO3Letter` varchar(45) NOT NULL,  
  `ISONumeric` int(11) NOT NULL,  
  `name` text NOT NULL,  
  `capital` text,  
  `area` double NOT NULL,  
  `population` int(11) NOT NULL,  
  `GovernmentForm` text NOT NULL,  
  PRIMARY KEY (`id`),  
  KEY `country2Region_idx` (`regionId`),  
  CONSTRAINT `Country2Region` FOREIGN KEY (`regionId`)  
    REFERENCES `region` (`id`) ON DELETE NO ACTION ON UPDATE NO ACTION  
)
```



Agenda



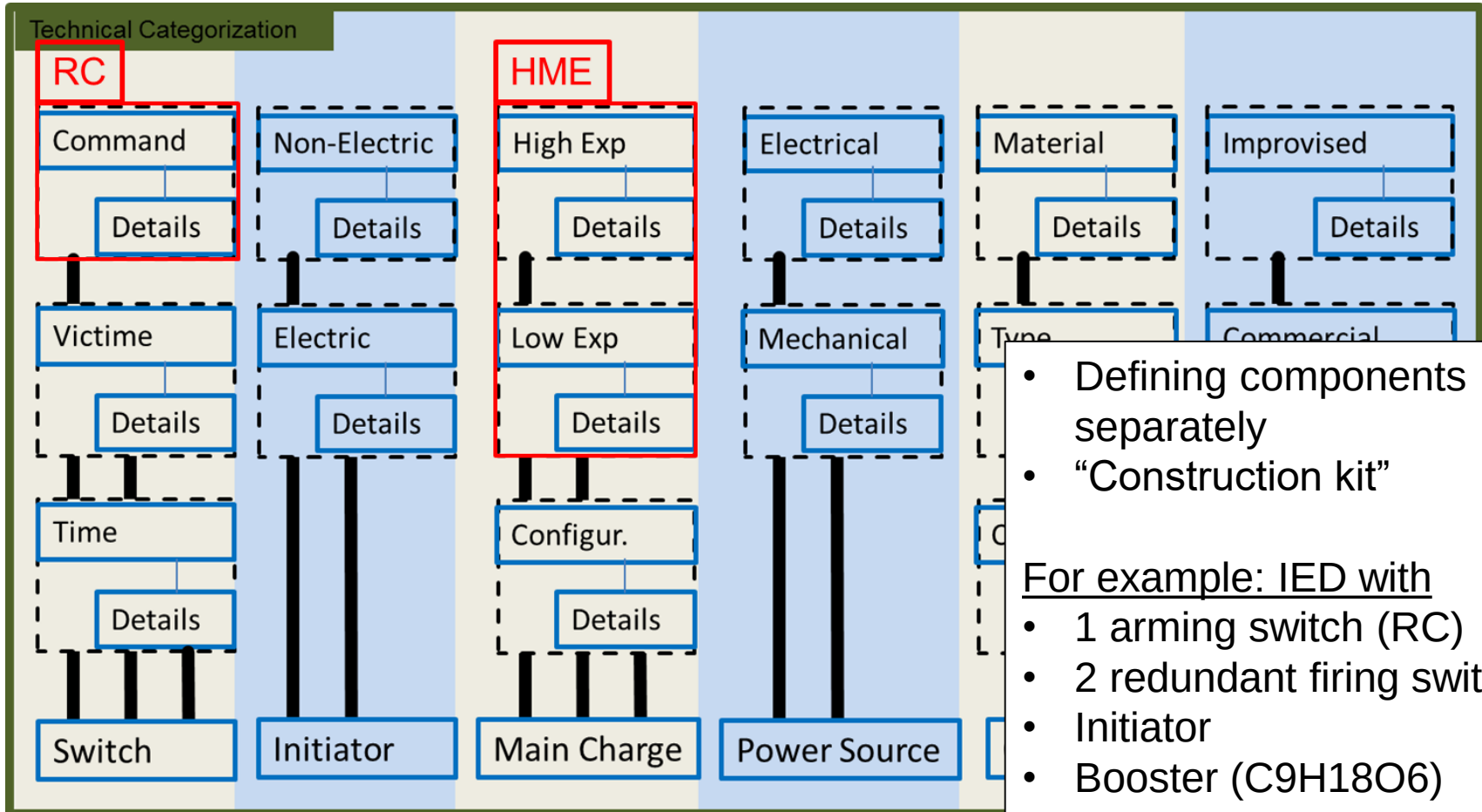


Agenda

- C-IED Database, Abstract View
- Advantage of this Structure
- Live Demonstration
- Backup: Complexity vs. User Friendly
- Backup: C-IED Database, ER-Diagrams
- Backup: Examples



Example: Technical Categorization



- Defining components separately
 - “Construction kit”
- For example: IED with
- 1 arming switch (RC)
 - 2 redundant firing switches
 - Initiator
 - Booster (C9H18O6)
 - HME: Ammonium Nitrate
 - Enhancement



Example: Technical Categorization

Storing IED Type, referencing Country: Afghanistan

Switch Initiator Main Charge Power Source Container Enhancement Related Documents

SWITCH

Command Operated	Command Wire	Consumer Electronics
Firing Switch	Pull	Hand Held Radio
Time Operated	Radio Controlled	Non-Hand Held Radio
Arming Switch	Optical	Cordless Phone
Victime Operated	Active Infrared	Mobile Phone
	Command Projectile	Custom RC
		Telemetry

General Information RC Specific Information

SWITCH

Command Operated	Pressure	Plunger
Firing Switch	Pressure Release	Crush Wire
Time Operated	Pressure/Pressure Relea...	
Arming Switch	Sensor	Plate
Victime Operated	Tension	
	Tension Release	Tube
	Collapsing Circuit	
	Membrane Switch	

General Information RC Specific Information

Add new Switch



Example: Technical Categorization

Storing IED Type, referencing Country: Afghanistan

Switch Initiator Main Charge Power Source Container Enhancement Related Documents

High Explosive Commercial Explosives Explosive Compounds 20 : 25 Kg

Low Explosive Military Explosives

Explosive Mixtures (FOX)

Main Charge Configuration Improvised Explosives:HME

General Information HME Specific Information

1

2

Switch Initiator Main Charge Power Source Container Enhancement Bearing Related

Ammonium Nitrat Fuel Oil (AnFO) 200 : 240 kg

HME Components:

☒	☒	Ammonium Nitrate, <chem>NH4NO3</chem>	70	:	72	%
☒	☒	Aluminium, Al	1	:	1	%
☒	☒	Mineralöl	25	:	29	%

Contaminations:

☒	☒	Eisen, Fe	2	:	3	mg/l
-------------------------------------	-------------------------------------	-----------	---	---	---	------

Add new HME Configuration

General Information HME Specific Information



Example: Attachements

Storing IED Type, referencing Country: Afghanistan

Switch **Initiator** **Main Charge** **Power Source** **Container** **Enhancement** **Related Documents**



[IED-128 10 Dec 15 Up](#)

[35.txt](#)

[25.txt](#)

[13.txt](#)

[1.txt](#)

[zeitlicher Verlauf.m](#)

[Folie1.PNG](#)

Level 2 Report ▼

Text ▼

Text ▼

Text ▼

Text ▼

Video ▼

Click to select type ▼

Attach new File

Attach new Image

- Attachments are organized by the database !



Example: Technical Categorization - RC

WHAT <Category of IED Incident>
WHEN <Date Time Group>
WHERE <Country, ADM1, ADM2, CITY (if known)>
Bearing Employment, Emplacement, Attachment
Switch - Firing Switch(Command Operated, Radio Controlled)

Selected Category
Custom RC : RFT-2 mod : KLK

Select Template

Hardware Signal

Select Intended Use

Add Identification/ Number/ Code

Add Report

Add Antenna

Initiation
☐ Direct Initiation
☐ Relay Switch
☐ UNK

Power Source
☐ Speaker
☐ Vibrate Motor
☐ Buzzer
☐ Display
☐ UNK

RC Components

Consumer Electronics
Hand Held Radio
Non-Hand Held Radio
Cordless Phone
Mobile Phone
Custom RC
Telemetry

RFT-2 mod KLK 400 C
SpiderMod KL-S3A 120 LA
WICR BT-01 201

Report/Description

Assessment

Conclusion

Categories

- 5 level, hierarchical
- 1st level is defined by WIT, SWITCH, right of RC
- Combined with templates to reduce manual input



Example: Technical Categorization - RC

Information about the IED-Incident & link to access full incident information

Selected Category

Custom RC : RFT-2 mod : KLK

Select Template

Consumer Electronics >

Hand Held Radio >

Non-Hand Held Radio >

Cordless Phone >

Mobile Phone >

Custom RC >

RFT-2 mod > KLK > 400 > C

Link to attachments

Hardware

Signal

Intended Use

Identification

- IMSI
- Serial

Initiation & Power

RC-Report/-Attachments

- Signal Pattern
- ACME

Antenna

- Type (Wire)
- Sub-Type (Short Dipol)
- Connector
- Length/Diameter/Gain

RC Components

Additional RC-Components

- RFM, HOPE RFM 211 A
- Microcontroller, PT2272
- Voltage Regulator, 7805

Report/Description

Assessment

Conclusion



Example: Technical Categorization - RC

WHAT WHEN WHERE Bearing Switch	<Category of IED Incident> <Date Time Group> <Country, ADM1, ADM2, CITY (if known)> Employment, Emplacement, Attachment - Firing Switch(Command Operated, Radio Controlled)	Selected Category Custom RC : RFT-2 mod : KLK : 400 : LA Select Template	
Hardware Signal			
Single Frequency (ies) Frequency Range(s) Mobile Network Standard(s)		Add Modulation	
Signal Properties			
Report/Description			
Assessment			
Conclusion			

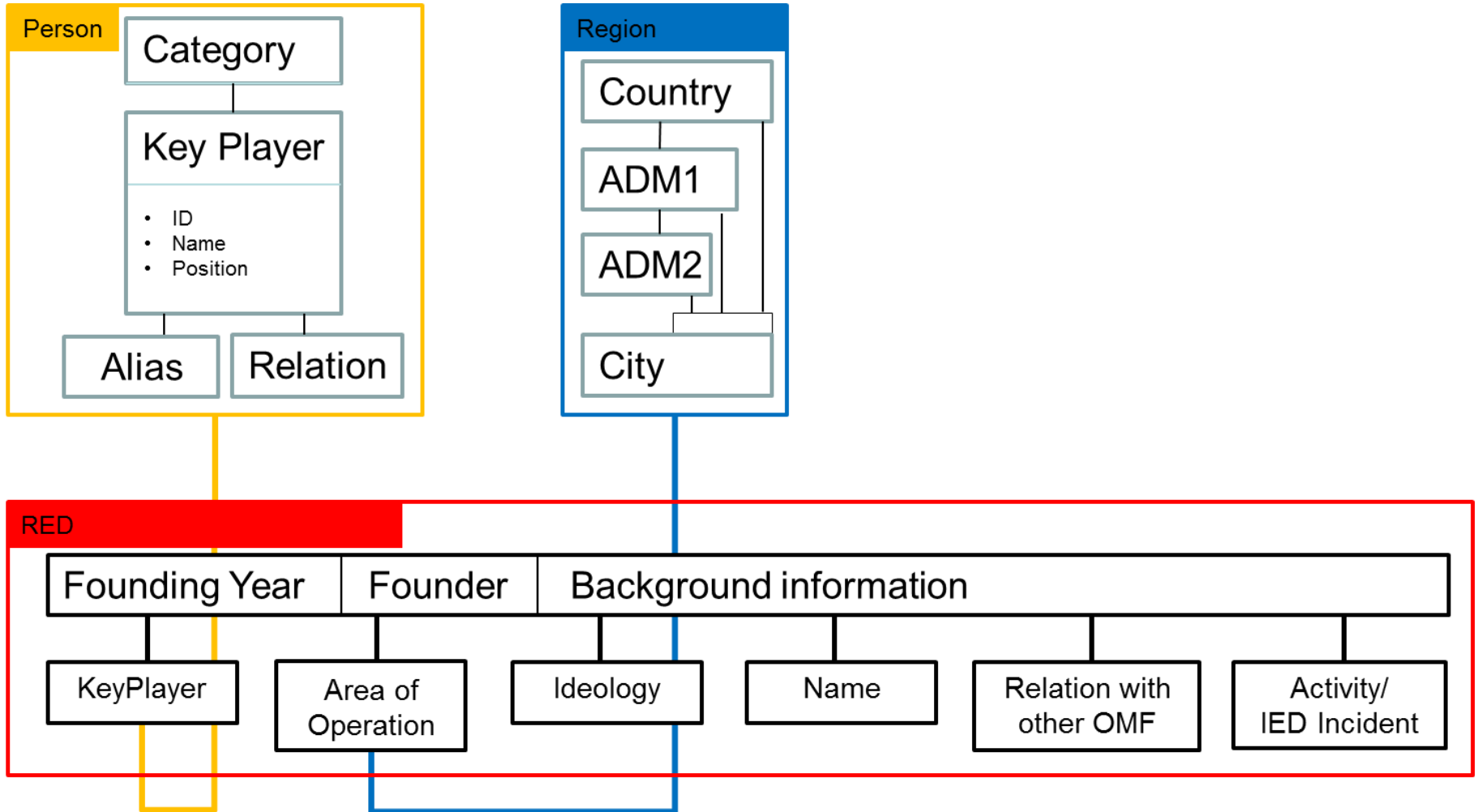


Example: Technical Categorization - RC

WHAT WHEN WHERE Bearing Switch	<Category of IED Incident> <Date Time Group> <Country, ADM1, ADM2, CITY (if known)> Employment, Emplacement, Attachment - Firing Switch(Command Operated, Radio Controlled)	Selected Category Custom RC : RFT-2 mod : KLK : 400 : LA Select Template	
Hardware Signal		Add Modulation	
Frequency - Set of Single Frequencies - Set of Bandwidths - Set of Mobile Network Standards		Modulation - Bandwidth - Modulation (Amplitude) - Information Type (Telemetry) - Multiplexing (Code Multiplex)	
Signal Properties - Up-, Down-, Transmission Time - Tolerance			
Description Assessment Conclusion			
Conclusion			



Example: RED





Example: Tactical Characterization

Report/Description

Description

Assessment

Assessment

Conclusion

Conclusion

Tactical Characterization

- Linked to IED-Incident



Example: IED-Incident, General

Country

ADM1

ADM2

City (Referencing ADM1)

Incidents related to

Afghanistan

Balkh

not selected

Kun

Balkh

Kundil Tepah

Start

End

01.01.2017

31.12.2017

Tactic: Complex Attack

Tactic: Suicide IED

Technique: HME

Technique: RC IED

General: Images/Movies

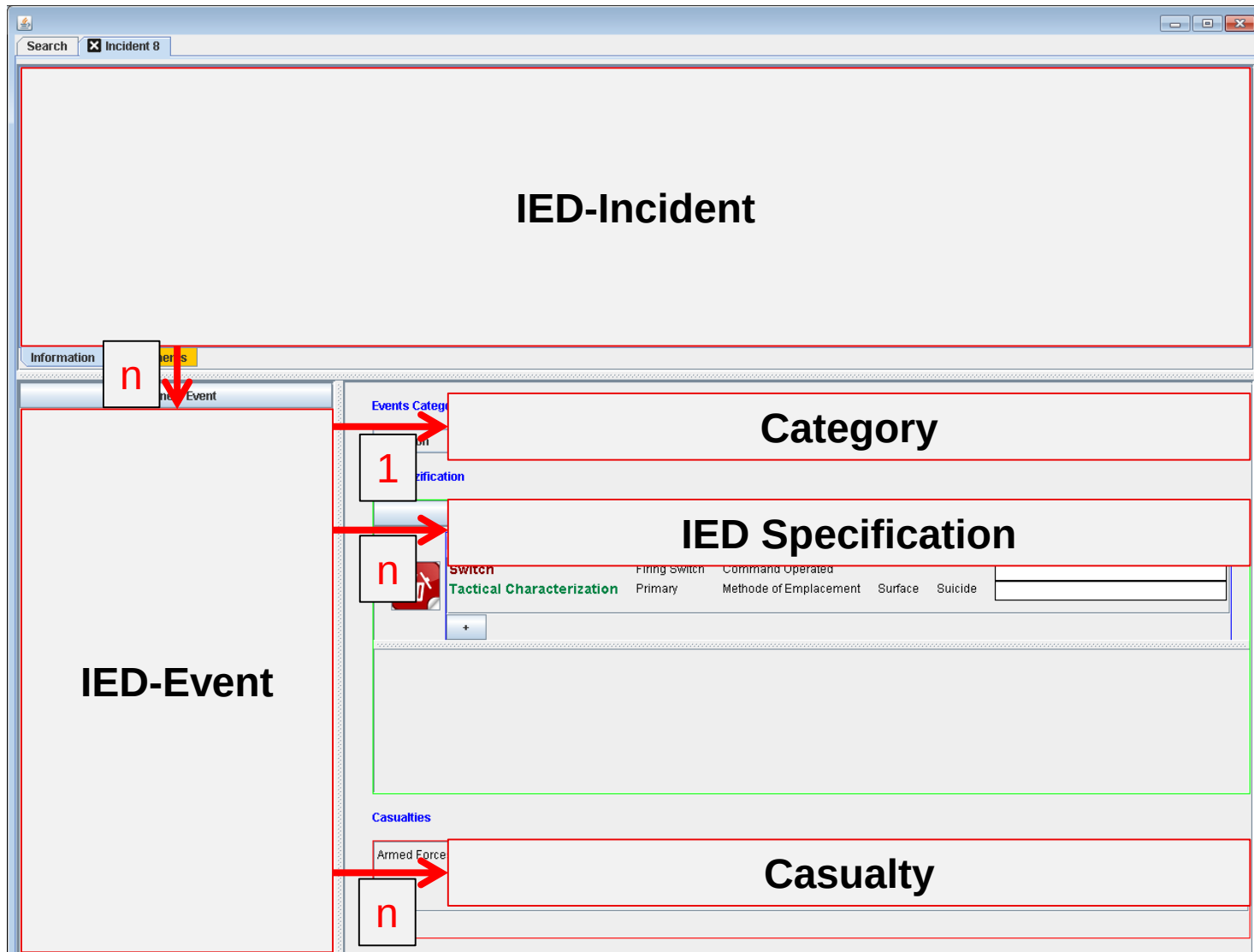
Date	Country	ADM 1	ADM 2	City	Category	Target	Summary
	Afghanistan	Balkh	Chimtal				
	Afghanistan	Balkh					
	Afghanistan	Balkh					
	Afghanistan	Balkh					
	Afghanistan	Balkh	Chimtal	Kundil Tepah			
	Afghanistan	Balkh		Mazar-e Sharif			
	Afghanistan	Balkh		Mazar-e Sharif			
	Afghanistan	Balkh		Mazar-e Sharif			
	Afghanistan	Balkh		Ab Darah			
	Afghanistan	Balkh		Abpartow			
	Afghanistan	Balkh		Mazar-e Sharif			
	Afghanistan	Balkh	Chahar Bolak				
	Afghanistan	Balkh		Ab-e Tal			
	Afghanistan	Balkh		Mazar-e Sharif			

List of matching IED-Incidents

- Review
 - Technic (including RC and HME)
 - Tactic
- Delete
- Export



Example: IED-Incident, General





Example: IED-Incident, General

Search

Incident 8

Country

Afghanistan

AOR

not selected

LOC/Route

not selected

ADM1

Balkh

ADM2

Chimtal

City (Referencing ADM1)

Selected City

Kundil Tepah

I/O

0

Distance

Direction

Lat/Lon (WGS84)

Delete

MGRS

WHEN

04.04.2016

06.00

WHO attacked

Al Qaeda

WHO/WHAT was attacked

Infrastructure

High Value

Armed Forces

Security Force

Afghan National Army

WHAT happend

Complex Attack

Information

Attachments

Add new Event

IED-Events associated with this Incident

Event 1

Event 2

Events Categorization

Explosion

Primary Event

IED Spezifikation

Add new IED

IED

Min 1

Max 1

Link to Detailed View

Switch

Tactical Characterization

Firing Switch

Command Operated

Primary

Methode of Emplacement

Surface

Suicide

Casualties

Armed Forces

Security Force

Afghan National Army

WIA

3

KIA

1