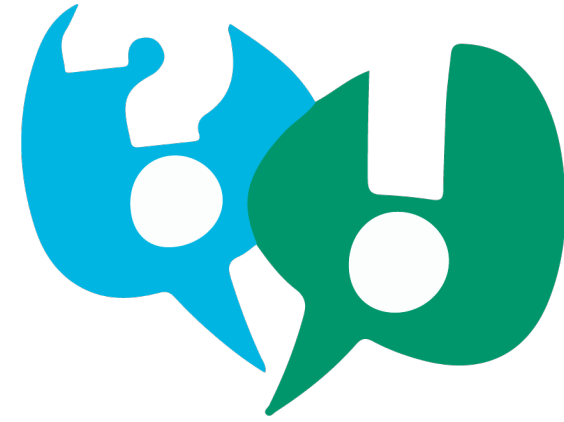# ledidi

Smarter research.
Deeper insights.

Capture – Collaborate – Analyse – Visualise

User friendly / do-it-yourself / all-in-one

Compliance with GDPR and national standards

Time and cost efficient

Collaboration

The research workflow...

Registry / database → Spreadsheet → Statistics → Graphs → Presentation / report

Serious injuries

Please select

Radio horizontal
Radio vertical
Dropdown
Remove

Vehicles involved

Please select

Victims

Please select

Location information

Date of last follow up

---- / -- / --

Date of last follow up

2018 / 24 / 03

Augue neque gravida in fermentum et sollicitudin ac o
eget. Tempor id eu nisl nunc mi ipsum faucibus vitae.

Date of birth

---- / -- / --

Date o

Arcu felis bibendum ut tristique et egesta

Amet venenatis urna cursus eget. In ornare quam viver
facilisis. Sit amet luctus venenatis lectus magna fringill
duis at consectetur lorem donec massa sapien faucibus.

« ‹ April 2021 › »

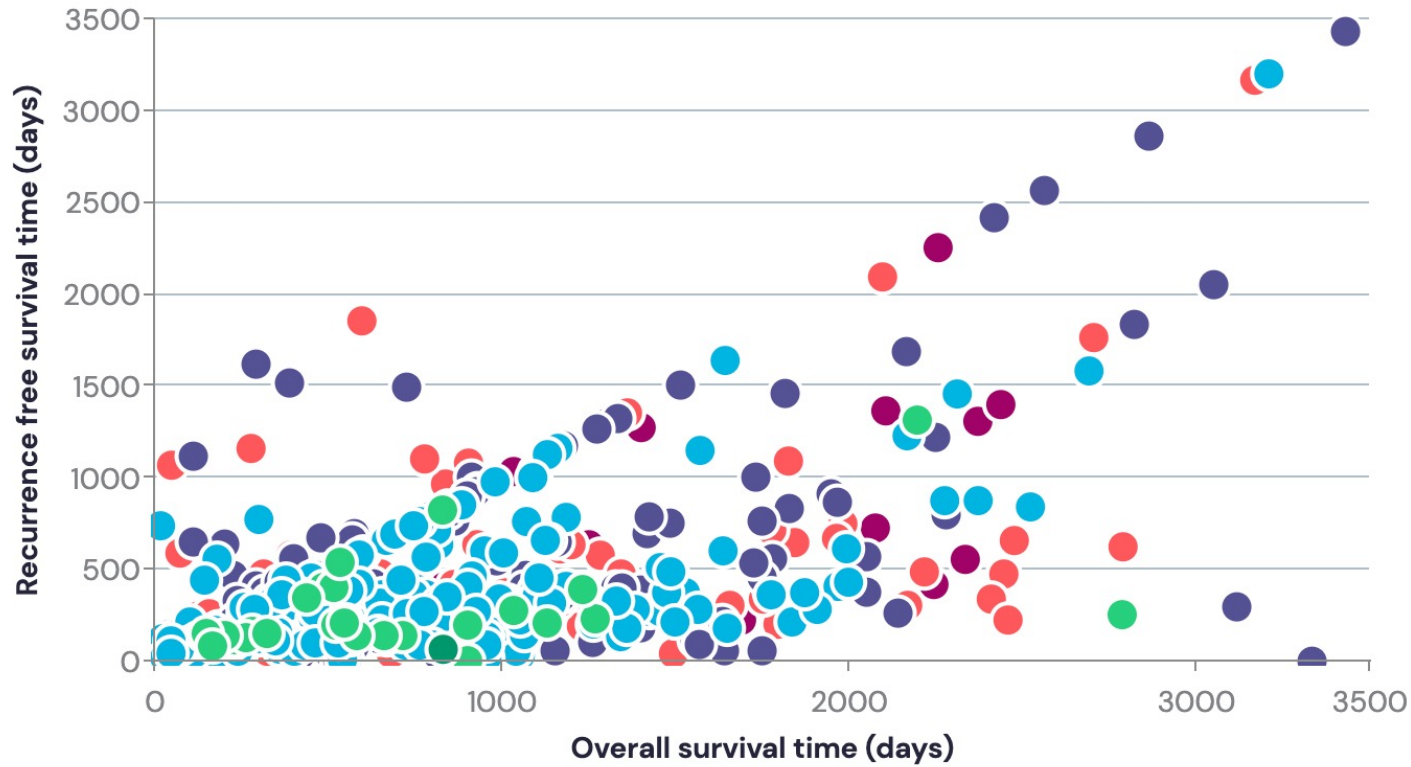| Mon	Tue	Wed	Thu	Fri	Sat	Sun
25	26	27	28	29	30	1
2	3	4	5	6	**7**	8
9	10	11	**12**	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

Correlations and linear regression

Risk score

● 0 ● 1 ● 2 ● 3 ● 4 ● 5

Show chart legend

X-variable

Overall survival time (days)

Y-variable

Recurrence free survival time (...

Grouping

Risk score

Pearson's Correlation Coefficient

Spearman's Rank Correlation Coefficient

Linear Regression

SPSS

ΣSigmaSTAT

✺ Viedoc

⊹ +ableau

REDCap

Ⓢ SciPy

Ⓧ Microsoft® Excel

ΣSigmaPlot.

MATLAB

**Most solutions are too advanced & difficult to use
Multiple solutions needed to support the workflow**

GraphPad

FileMaker.

aridhia DRE

Ⓡ R

A Microsoft® Access

Medinsight

Power BI

Registry / database → Spreadsheet → Statistics → Graphs → Presentation / report

Registry / database
- Viedoc
- REDCap
- FileMaker
- Microsoft® Access
- Medinsight

Spreadsheet
- Microsoft® Excel

Statistics
- SPSS
- SigmaSTAT
- Power BI
- tableau
- MATLAB
- R
- SciPy
- aridhia DRE

Graphs
- SigmaPlot
- GraphPad
- Power BI
- tableau
- aridhia DRE

International research collaborations with Privacy Preserving Data Analysis

Registry / database → Spreadsheet → Statistics → Graphs → Presentation / report
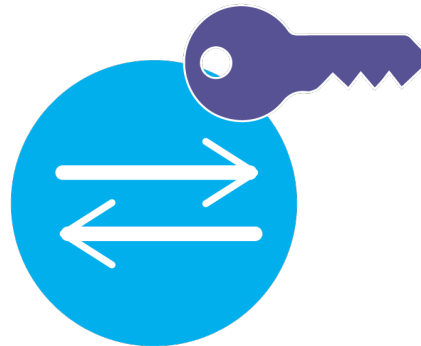
Cloud – GDPR – Schrems II

Confidential Computing

– data protection throughout the complete lifecycle

Data at rest

Data in transit
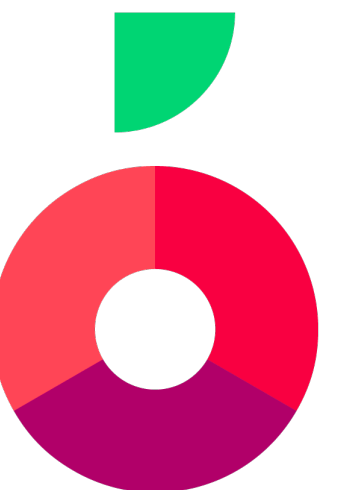
Data in use

ledidi

Smarter research. Deeper insights.

Capture – Collaborate – Analyse – Visualise

Standards in Ledidi Core

FHIR, SNOMED etc

Odd Christian Landmark

Web app

APIs

HL7 FHIR   HL7 FHIR

Metadata   Data Entries   Project   Report

Business & Data Logic

HL7 FHIR

Metadata   Data Entries   Project   Report

Databases

Ledidi Core concepts

Variables

Project Design ▾   Analysis   Dataset   Documents   Collaborators

Variables

Add variables to your project

Variables are the essential part of the project, let's start by adding
them manually or import your variable from a database file

Create new variable

or **Import data and variables**

New variable

Variable name

Age

Description

No Description

⬤ **Restricted**

Hide variable from users without access to view restricted data.

Variable type

Entry ⌄

Data type

Number without decimals ⌄

⬤ **Mandatory**

Must be given a value when creating and updating an entry in the dataset.

⬤ **Validation range**

Cancel   **Create variable**

? Log out OP

Project Design ▾   Analysis   Dataset   Documents   Collaborators

🔍 Search variables

+ New

Variables

Show **All** ▾   **All Types** ▾

Sort **Variables Order** ▾

Age
Number without decimals

Variables

Show **All** ▾   **All Types** ▾

Age	A category variable	Another category variable	Some date	Another date
Number without decimals	Category	Category	Date	Date

Variables

Show **All** ▾   **All Types** ▾

Age	A category variable	Another category variable	📁 Dates
Number without decimals	Category	Category	2 variables

Age

A category variable

No choices available + Add New Value

Another category variable

No choices available + Add New Value

⌃ 🗀 Dates

Some date

----/--/-- 📅

Another date

----/--/-- 📅

Dataset

Age	A category variable	Another category variable	Dates		Last modified by	Owned by	Created date	Last modified
			Some date	Another date				
54	aaaa	bbbb	2021-12-10	2021-12-29	oddchristianpreprod	oddchristianpreprod	2021-12-01	2021-12-01
65	bbb	bbbb	2021-12-06	2021-12-17	oddchristianpreprod	oddchristianpreprod	2021-12-01	2021-12-01

"observationData":
 {
   "age":78,
   "acategoryvariable":"bbb",
   "anothercategoryvariable":"bbbb",
   "somedate":"2021-12-09",
   "anotherdate":"2021-12-05"
 }

Ledidi Core concepts

Templates

Variables

Templates

Dependencies

Forms

Statuses

All Types ▼

Number without decimals

A category variable
Category

Another category variable
Category

📁 Dates

2 variables

+ New template

Templates

My templates   Other templates

Variables and Groups   •••

Templates

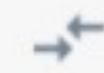| ⌄   Age |
| --- |
| ⌄   A category variable |
| ⌄   Another category variable |
| ⌄   🗀   Dates |

⌃   📄   Diagnosis template   15 variables   •••

Dropzone   **Description**

⇄   Drag and drop variables or groups of variables here.

⌄   STATE AT LAST FOLLOWUP
⌄   SURVIVAL FROM SURGERY DAYS
⌄   DATE OF LAST FOLLOWUPORDEATH 2
⌄   STATE AT LAST FOLLOWUP 2
⌄   DIAGNOSE 2   🗑
⌄   SURVIVAL FROM SURGERY DAYS 2

+ New template

Templates

My templates   Other templates

Variables and Groups   •••

▾ Age

▾ A category variable

▾ Another category variable

▾ 🗀 Dates

Templates

∧ 📄 Diagnosis template   15 variables •••

	Update
Dropzone **Description**	Share ❯
	Import
	Remove

⇄ Drag and drop variables or groups of variables here.

▾ STATE AT LAST FOLLOWUP

▾ SURVIVAL FROM SURGERY DAYS

▾ DATE OF LAST FOLLOWUPORDEATH 2

▾ STATE AT LAST FOLLOWUP 2

▾ DIAGNOSE 2

▾ SURVIVAL FROM SURGERY DAYS 2

Standards as variable templates

FHIR example

+ New template

Templates

My templates   Other templates

Variables and Groups   ...

Templates

| ▾ | Age | 15 variables |

| ▾ | A category variable |

| ▾ | Another category variable |

| ▴ | 🗀 Dates |

| ↳ | ▾ Some date |

| ↳ | ▾ Another date |

| ▾ | 📄 Diagnosis template | 15 variables |

| ▾ | 📄 FHIR Medication | 4 variables |

+ New template

Templates

My templates   Other templates

Variables and Groups   ⋯

| ⌄ Age |
| ⌄ A category variable |
| ⌄ Another category variable |

⌄ 📁 Dates

↳ ⌄ Some date

↳ ⌄ Another date

Templates

| ⌄ 📄 Diagnosis template | 15 variables |

⌃ 📄 FHIR Medication   4 variables ⋯

Dropzone   **Description**

⇤ Drag and drop variables or groups of variables here.

⌃ 📁 Medication

↳ ⌄ manufacturer

↳ ⌄ status

↳ ⌄ code

↳ ⌄ identifier

+ New template

Templates

My templates   Other templates

Variables and Groups   •••

⌄ Age	
⌄ A category variable	
⌄ Another category variable	
⌃ ▢ Dates	
↳ ⌄ Some date	
↳ ⌄ Another date	

Templates

⌄ 📄 Diagnosis template		15 variables
⌃ 📄 FHIR Medication		4 variables •••

Dropzone   **Description**

Update	
Share	❯
Import	
Remove	

⇥⇤   Drag and drop variables or groups of variables here.

⌃ 🗀 Medication	
↳ ⌄ manufacturer	
↳ ⌄ status	
↳ ⌄ code	
↳ ⌄ identifier	

Template imported into project successfully! ✕

Project Design ▾   Analysis   Dataset   Documents

+ New template

Templates

My templates   Other templates

Variables and Groups   •••

∨ Age	15 variables •••

∨   A category variable

∨   Another category variable

∨   ▢ Dates

∨   ▢ Medication

Templates

∨ 🖹 Diagnosis template	15 variables •••

∧ 🖹 FHIR Medication	4 variables

Dropzone   **Description**

⇤   Drag and drop variables or groups of variables here.

∧   ▢ Medication

↳   ∨   manufacturer

↳   ∨   status

↳   ∨   code

↳   ∨   identifier

Search variables

+ New

Variables

Show **All ▾**   **All Types ▾**   Sort   **Variables Order ▾**

Age	A category variable	Another category variable	🗀 Dates	🗀 Medication
Number without decimals	Category	Category	2 variables	4 variables

Edit Group

Group name

Medication

manufacturer
Text

status
Category

code
Category

identifier
Text

Delete group

Edit Variable

General Details   Calculation rules

Variable name   Description

code   SNOMED CT Medication Code

⊙ Restricted
Hide variable from users without access to view restricted data.

Variable type   Data type

Entry   ⌄   Category   ⌄

⊙ Mandatory
Must be given a value when creating and updating an entry in the dataset.

⬤ Fixed values
Selectable values for this variable is limited to the values specified below. When off, new values can be added in the entry page.

261000 ✕   336001 ✕   363000 ✕   519005 ✕   585007 ✕   Use enter to add

⬤ Show as dropdown
When this one is checked, the categories are selectable in a dropdown, instead of radio buttons.

Delete variable   Cancel   Update Variable

Edit Group   ✕

Group name

Medication

---

manufacturer
Text

---

status
Category

---

code
Category

---

identifier
Text

Delete group

Edit Variable

General Details   Calculation rules

Variable name   **Description**

status   No Description

⊙ **Restricted**
Hide variable from users without access to view restricted data.

Variable type   **Data type**

Entry   ⌄   Category   ⌄

⊙ **Mandatory**
Must be given a value when creating and updating an entry in the dataset.

◉ **Fixed values**
Selectable values for this variable is limited to the values specified below. When off, new values can be added in the entry page.

active ✕   inactive ✕   entered-in-error ✕   Use enter to add

⊙ **Show as dropdown**
When this one is checked, the categories are selectable in a dropdown, instead of radio buttons.

Delete variable   Cancel   Update Variable

Sort   **Variables Order ▾**

📁 Medication
   4 variables

```
"observationData":
 {
   "age":78,
   "acategoryvariable":"bbb",
   "anothercategoryvariable":"bbbb",
   "somedate":"2021-12-09",
   "anotherdate":"2021-12-05",
   "medication": {
     "manufacturer":"ABCDEFabcdef",
     "status":"active",
     "code":"336001",
     "identifier":" 24wg42534t234"
   }
 }
```

Roadmap - 2022

- Separate set of templates offered by Ledidi - standards

  - FHIR variable set template

  - SNOMED category variable templates

- API customization

- Standards-based templates also within API customisation

  - Automatically taking advantage of adaptions through profiles, extensions etc

- Maybe

  - Wizards for using the right part of the standard in the right way