



EXHIBITION OBJECT DATA EXCHANGE MODEL

**EODEM – eine Einführung in den neuen Datenstandard  
für den Leihverkehr zwischen Museen**

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CIDOC Documentation Standards Working Group

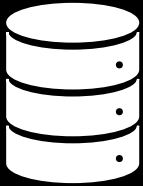
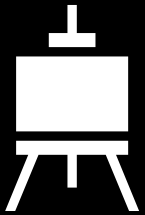
#EODEM

# Was versuchen wir zu erreichen ...

Export von Objektdaten zu einer Ausstellung  
aus einem System  
per Knopfdruck und den Import  
in ein (anderes) System wiederum  
per Knopfdruck

# Wie sollte das ablaufen...

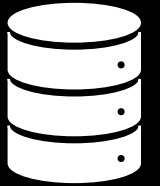
Leihgeber



EODEM Export



Leihnehmer



EODEM Import

# Wie gehen wir vor?

2016 – Mailand



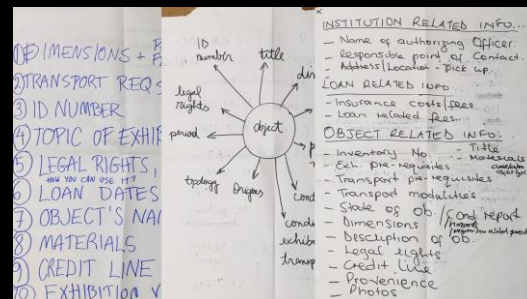
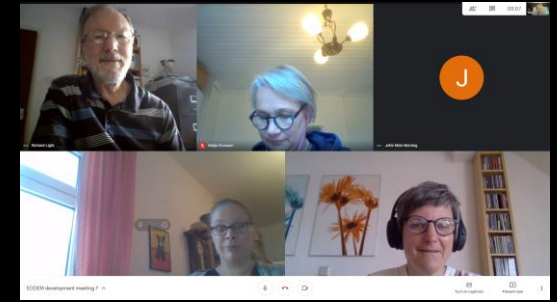
2017 – Tiflis



2018 – Heraklion



2020-jetzt – online



# Wie gehen wir vor: 2020-jetzt – online

## **Teilnehmer**

- Axiell
- Gallery Systems
- Knowledge Integration
- KulturIT
- Modes User Association
- Sistemas do Futuro Ltd
- Zetcom
- CIDOC Documentation Standards Working Group
- CHIN
- LIDO Working Group

## **Weitere Teilnehmer**

- ArchiveTech.net / UniqueCollection.org
- CoMwork
- Link2
- Rosphoto
- Profium
- Roxy.io
- Userix Oy
- Vernon Systems

# Wie gehen wir vor: 2020-jetzt – online

- Units of information
- Datenstandard inkl. Dateiformat
- Dokumentation

# Datenstandard



*Lightweight Information Describing Objects*

LIDO version 1.1

<https://cidoc.mini.icom.museum/working-groups/lido/>

# Datenformat

```
<?xml version="1.0"?>
```



# Units of Information

1.	EODEM Exchange*	37.	MakerMaker Identifier	73.	Relative Humidity Requirements Group*
2.	EODEM Object*	38.	Maker Display Name	74.	Relative Humidity Requirements Text
3.	LIDO Record ID\$¶¶	39.	Maker Sort Name	75.	Relative Humidity Requirements Measurements Group*
4.	URI	40.	Maker Earliest Date	76.	Target Minimum Relative Humidity
5.	LIDO Application Profile\$¶¶	41.	Maker Latest Date	77.	Target Maximum Relative Humidity
6.	Object Metadata*	42.	Maker Role Group*	78.	Maximum Relative Humidity Variation
7.	Record Language\$¶¶	43.	Maker Role Identifier†	79.	Minimum Relative Humidity Variation Period
8.	Object Type Group*	44.	Maker Role Keyword†	80.	Visible Light Exposure Requirements Group*
9.	Object Type Identifier†	45.	Attribution Qualifier	81.	Visible Light Exposure Requirements Text
10.	Object Type Keyword†¶¶	46.	Production Date Group*	82.	Visible Light Exposure Requirements Measurements Group*
11.	Title/Name Group*	47.	Display Production Date	83.	Maximum Visible Light Exposure
12.	Title Type¶¶	48.	Earliest Production Date	84.	Maximum Cumulative Visible Light Exposure
13.	Title/Name¶¶	49.	Latest Production Date	85.	Maximum Cumulative Visible Light Exposure Duration
14.	Title Language¶¶	50.	Production Period Group*	86.	Ultraviolet Light Exposure Requirements Group*
15.	Lender Group [1: repository]*‡	51.	Production Period Identifier†	87.	Ultraviolet Light Exposure Requirements Text
16.	Lender Identifier [1: repository]†‡\$	52.	Production Period Keyword†	88.	Ultraviolet Light Exposure Requirements Measurements Group*
17.	Lender Name [1: repository]†‡\$¶¶	53.	Loan Assessment Group*	89.	Maximum Ultraviolet Light Exposure
18.	Object Identifier¶¶	54.	Value Group*	90.	Target Ultraviolet Light Exposure
19.	Brief Description	55.	Value Currency	91.	Upper Ultraviolet Light Wavelength Boundary
20.	Measurement Group*	56.	Value	92.	Installation Method
21.	Measurement Text	57.	Insurance/Indemnity	93.	Display Method
22.	Dimension Aspect Group*	58.	Condition Of Object	94.	Security
23.	Dimension Group*	59.	Object Move Requirements Group*	95.	Photography And Filming
24.	Dimension	60.	Handling	96.	Administrative Metadata*
25.	Unit	61.	Transport	97.	Credit line
26.	Measurement	62.	Condition Checking	98.	Local Record ID\$¶¶
27.	Dimension Aspect	63.	Hazards	99.	LIDO Record Type Group*‡
28.	Dimension Qualifier	64.	Object Display Requirements Group*	100.	LIDO Record Type Identifier†¶¶
29.	Materials Group*	65.	Temperature Requirements Group*	101.	LIDO Record Type Keyword†¶¶
30.	Material Description	66.	Temperature Requirements Text	102.	Lender Group [2: record source]*
31.	Material Group*	67.	Temperature Requirements Measurements Group*	103.	Lender Identifier [2: record source]†‡\$
32.	Material Identifier†	68.	Target Minimum Temperature	104.	Lender Name [2: record source]†‡\$¶¶
33.	Material Keyword†	69.	Target Maximum Temperature	105.	Export Date/Timestamp\$¶¶
34.	Object Production Group*	70.	Maximum Temperature Variation	106.	Image Group*
35.	Maker Group*	71.	Minimum Temperature Variation Period	107.	Image
36.	Maker Identification Group*			108.	Image Type\$
				109.	Identifier Type

# Units of Information

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5.	LIDO Application Profile\$¶¶	41.	Maker Latest Date	78.	Target Maximum Relative Humidity
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7.	Record Language\$¶¶	43.	Maker Role Identifier†	80.	Minimum Relative Humidity Variation Period
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16.	Lender Identifier [1: repository]†‡\$	52.	Production Period Keyword†	89.	Ultraviolet Light Exposure Requirements Measurements Group*
17.	Lender Name [1: repository]†‡\$¶¶	53.	Loan Assignment Group*	90.	Maximum Ultraviolet Light Exposure
18.	Object Identifier¶¶	54.	Value Group	91.	Target Ultraviolet Light Exposure
19.	Brief Description	55.	Value Currency	92.	Upper Ultraviolet Light Wavelength Boundary
20.	Measurement Group*	56.	Value Unit	93.	Installation Method
21.	Measurement Text	57.	Insurance/Indemnity	94.	Display Method
22.	Dimension Aspect Group*	58.	Component of Object	95.	Security
23.	Dimension Group*	59.	Object Move Requirements Group*	96.	Photography And Filming
24.	Dimension	60.	Handling	97.	Administrative Metadata*
25.	Unit	61.	Transport	98.	Credit line
26.	Measurement	62.	Condition Checking	99.	Local Record ID\$¶¶
27.	Dimension Aspect	63.	Hazards	100.	LIDO Record Type Group*‡
28.	Dimension Qualifier	64.	Object Display Requirements Group*	101.	LIDO Record Type Identifier†¶¶
29.	Materials Group*	65.	Temperature Requirements Group*	102.	LIDO Record Type Keyword†¶¶
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33.	Material Keyword†	69.	Target Maximum Temperature	106.	Export Date/Timestamp\$¶¶
34.	Object Production Group*	70.	Maximum Temperature Variation	107.	Image Group*
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36.	Maker Identification Group*			109.	Image Type\$
					Identifier Type

Keine Panik!

# Units of information

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12.	<b>Title Type</b> ¶¶	48.	Display Production Date	84.	Maximum Cumulative Visible Light Exposure
13.	<b>Title/Name</b> ¶¶	49.	Earliest Production Date	85.	Maximum Cumulative Visible Light Exposure Duration
14.	<b>Title Language</b> ¶¶	50.	Latest Production Date	86.	Ultraviolet Light Exposure Requirements Group*
15.	Lender Group [1: repository]*‡	51.	Production Period Group*	87.	Ultraviolet Light Exposure Requirements Text
16.	Lender Identifier [1: repository]†‡§	52.	Production Period Identifier†	88.	Ultraviolet Light Exposure Requirements Measurements Group*
17.	<b>Lender Name [1: repository]</b> †‡§¶	53.	Production Period Keyword†	89.	Maximum Ultraviolet Light Exposure
18.	<b>Object Identifier</b> ¶¶	54.	Loan Assessment Group*	90.	Target Ultraviolet Light Exposure
19.	Brief Description	55.	Value Group*	91.	Upper Ultraviolet Light Wavelength Boundary
20.	Measurement Group*	56.	Value Currency	92.	Installation Method
21.	Measurement Text	57.	Value	93.	Display Method
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23.	Dimension Group*	59.	Condition Of Object	95.	Photography And Filming
24.	Dimension	60.	Object Move Requirements Group*	96.	Administrative Metadata*
25.	Unit	61.	Handling	97.	Credit line
26.	Measurement	62.	Transport	98.	<b>Local Record ID</b> \$¶¶
27.	Dimension Aspect	63.	Condition Checking	99.	LIDO Record Type Group*‡
28.	Dimension Qualifier	64.	Hazards	100.	<b>LIDO Record Type Identifier</b> †¶¶
29.	Materials Group*	65.	Object Display Requirements Group*	101.	<b>LIDO Record Type Keyword</b> †¶¶
30.	Material Description	66.	Temperature Requirements Group*	102.	Lender Group [2: record source]*
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32.	Material Identifier†	68.	Temperature Requirements Measurements Group*	104.	Lender Name [2: record source]†‡§¶
33.	Material Keyword†	69.	Target Minimum Temperature	105.	<b>Export Date/Timestamp</b> \$¶¶
34.	Object Production Group*	70.	Target Maximum Temperature	106.	Image Group*
35.	Maker Group*	71.	Maximum Temperature Variation	107.	Image
36.	Maker Identification Group*	72.	Minimum Temperature Variation Period	108.	Image Type\$
				109.	Identifier Type

# Units of information

1. LIDO Record ID
2. LIDO Application Profile
3. Record Language
4. Object Type Keyword
5. Title Type
6. Title/Name
7. Title Language
8. Lender Name
9. Object Identifier
10. Local Record ID
11. LIDO Record Type Identifier
12. LIDO Record Type Keyword
13. Export Date/Timestamp

# Units of information

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2. LIDO Application Profile
3. Record Language
4. Object Type Keyword
5. Title Type
6. Title/Name
7. Title Language
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9. Object Identifier
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# Units of information

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# Wo stehen wir jetzt?

## 1. Ein XML-Dokument:

1. Schema-Änderungen

2. Dokumentation

3. Generierung von

1. EODEM XSD Schema-Datei

2. HTML-Dokumentation

3. PDF-Dokumentation

4. HTML-Skizze einer EODEM-LIDO-Dokumentstruktur

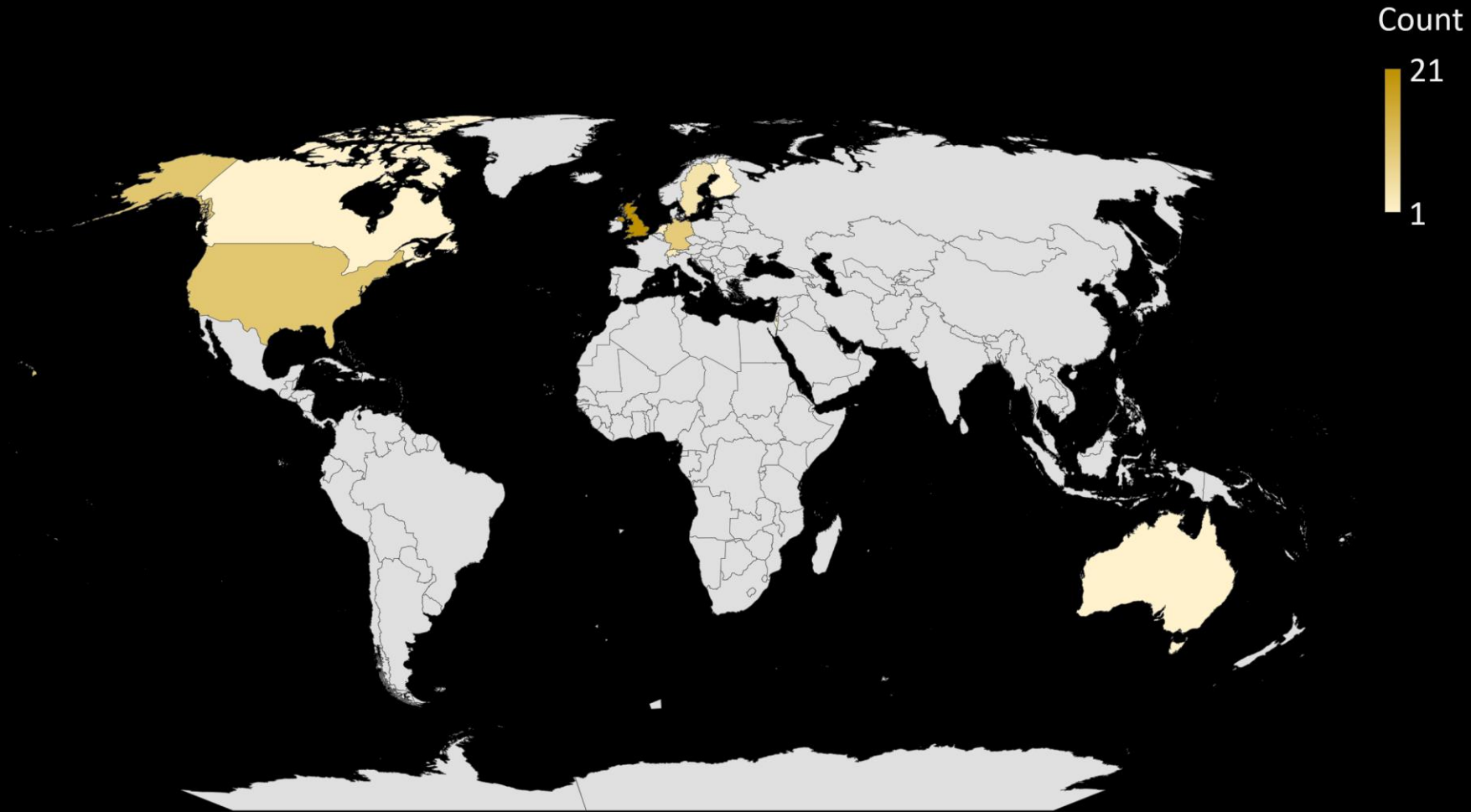
## 2. Beispieldokument EODEM LIDO

## 3. EODEM LIDO Schematron XSLT-Regeln um detaillierte Validierungen zu erzeugen

# ...und warum: Zeit

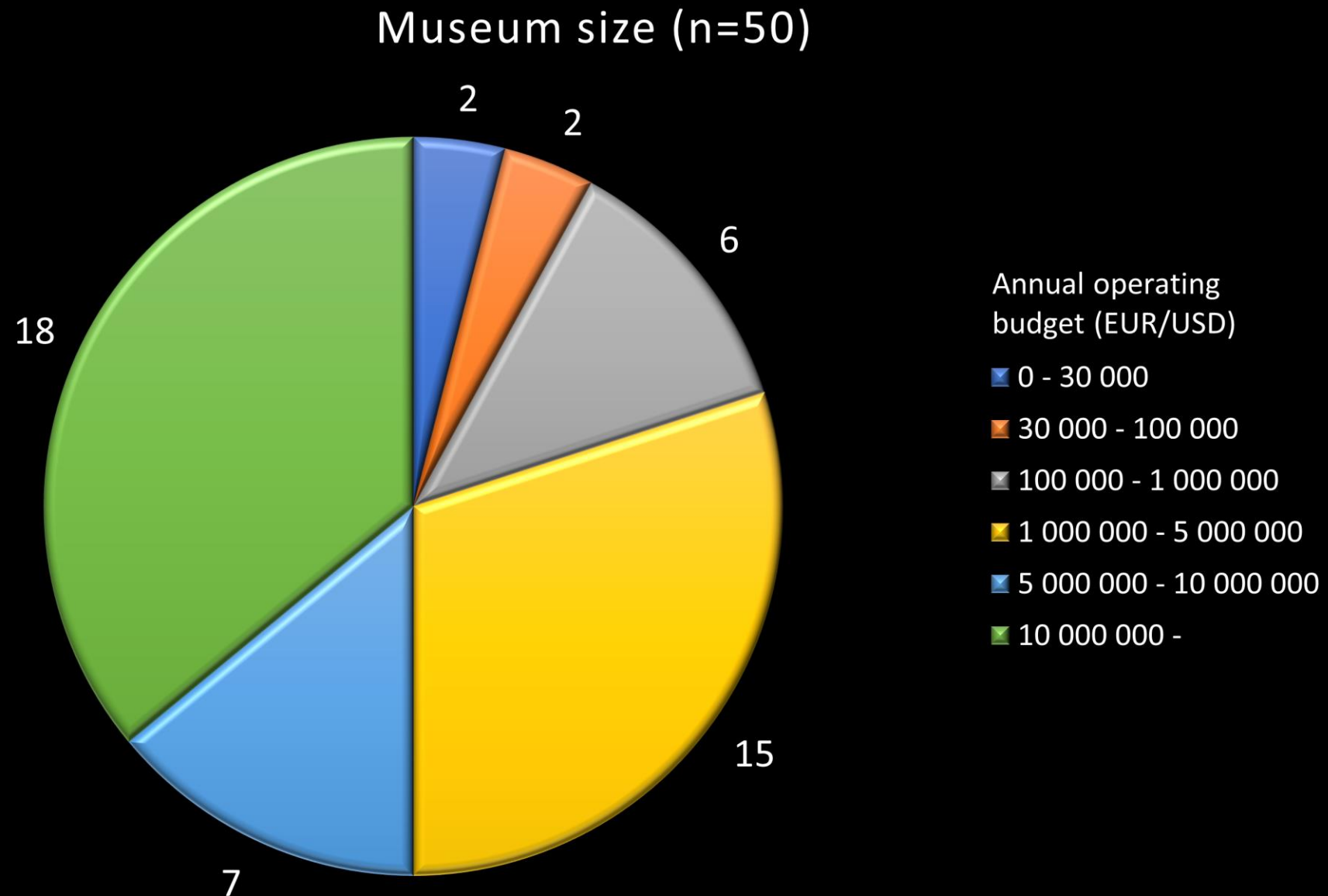
## Responses by country (n=53)

Australien	1
Kanada	1
Finnland	1
Deutschland	9
Israel	1
Niederlande	2
Schweden	4
Schweiz	3
United Kingdom	21
USA	10



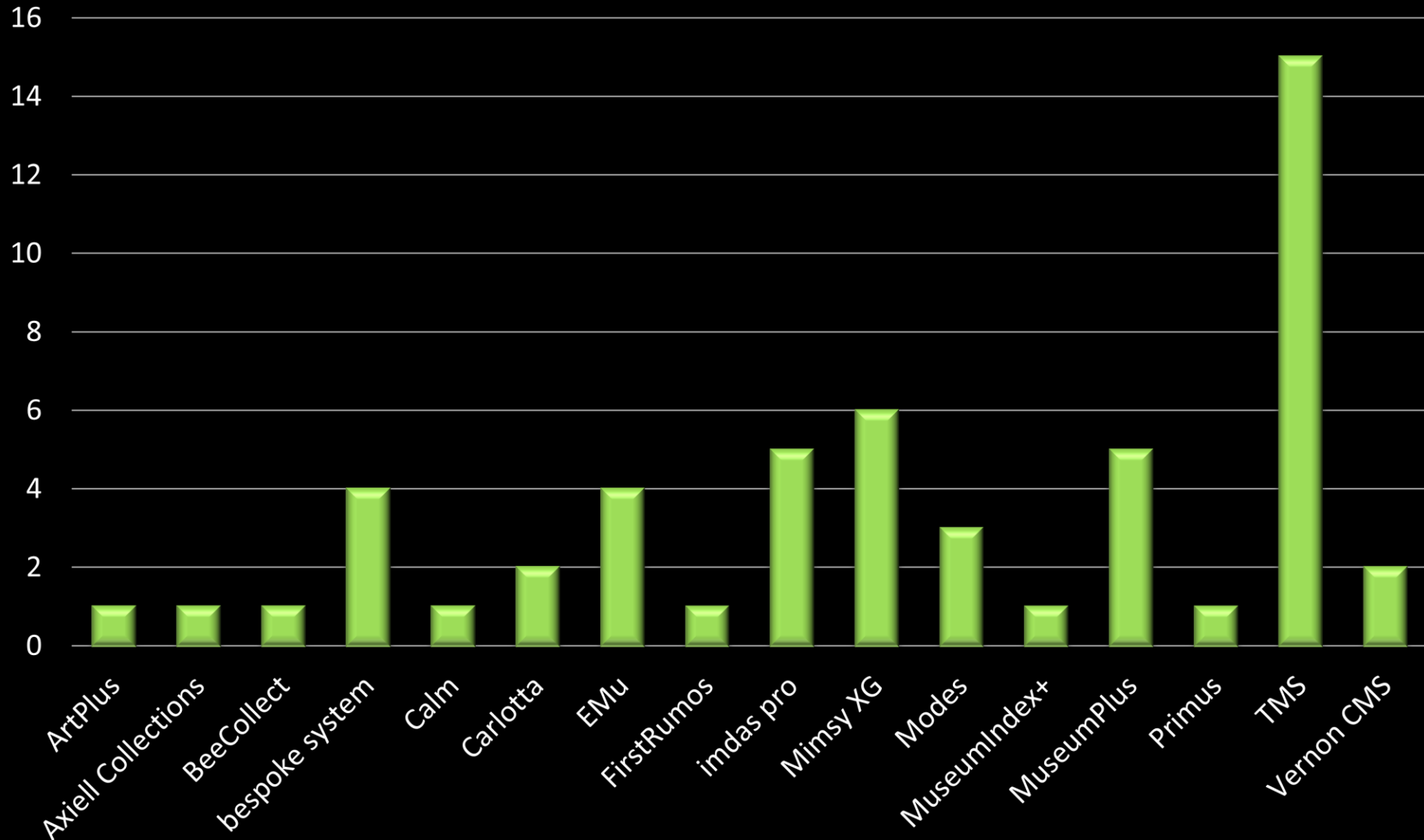


# ...und warum: Zeit



# ...und warum: Zeit

Collections management system (n=53)



# ...und warum: Zeit

## Leihgaben

minimum 2  
median 47  
mean 149  
maximum 3000

## Leihnahmen

minimum 0  
median 85  
mean 200  
maximum 1000

Loans per year (n=53 (in) / 52 (out))



# ...und warum: Zeit

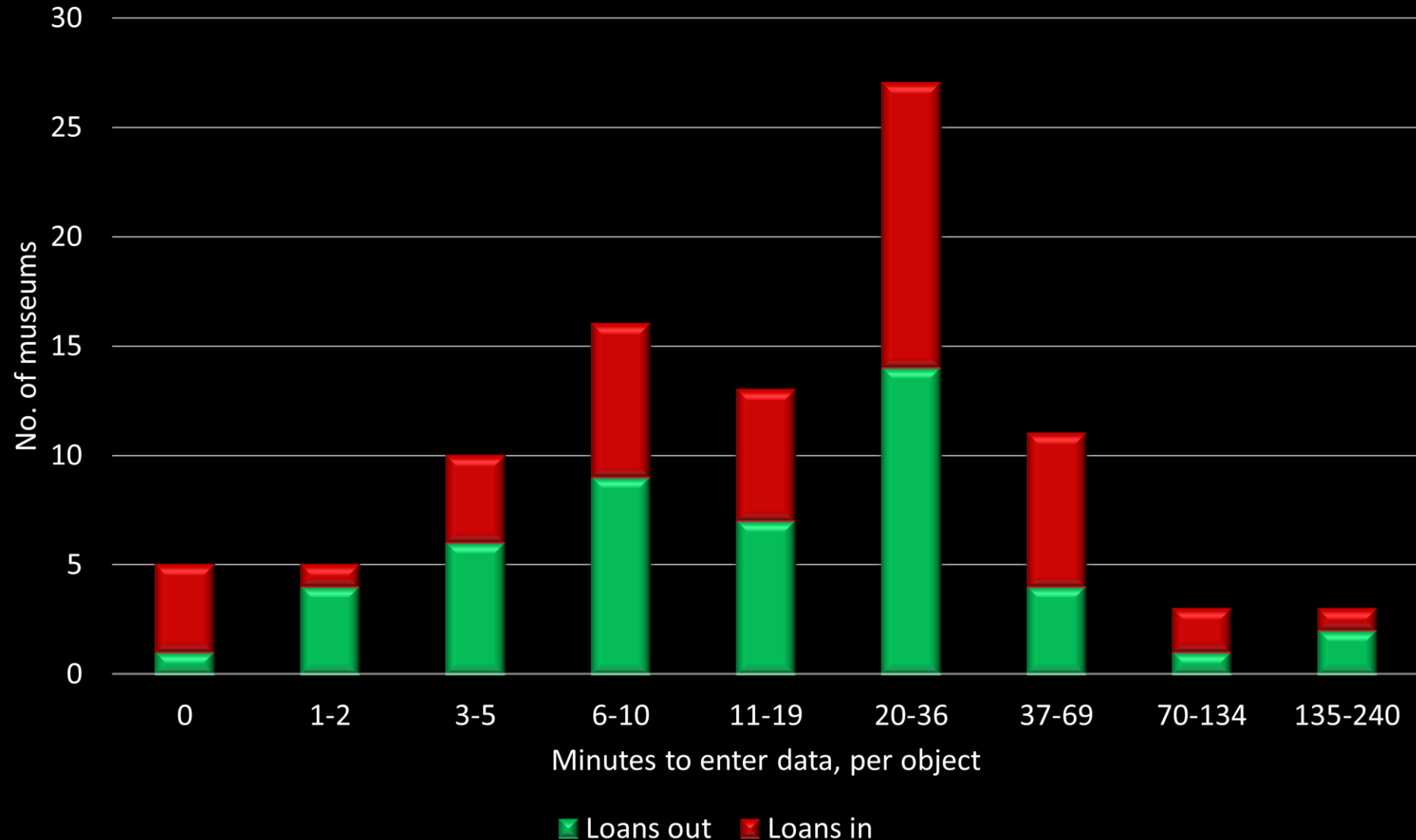
Data entry time per object (n=49 (in) / 52 (out))

## Leihgaben

minimum 0  
median 15  
mean 26  
maximum 180

## Leihnahmen

minimum 0  
median 17.5  
mean 29  
maximum 240



# ...und warum: Zeit

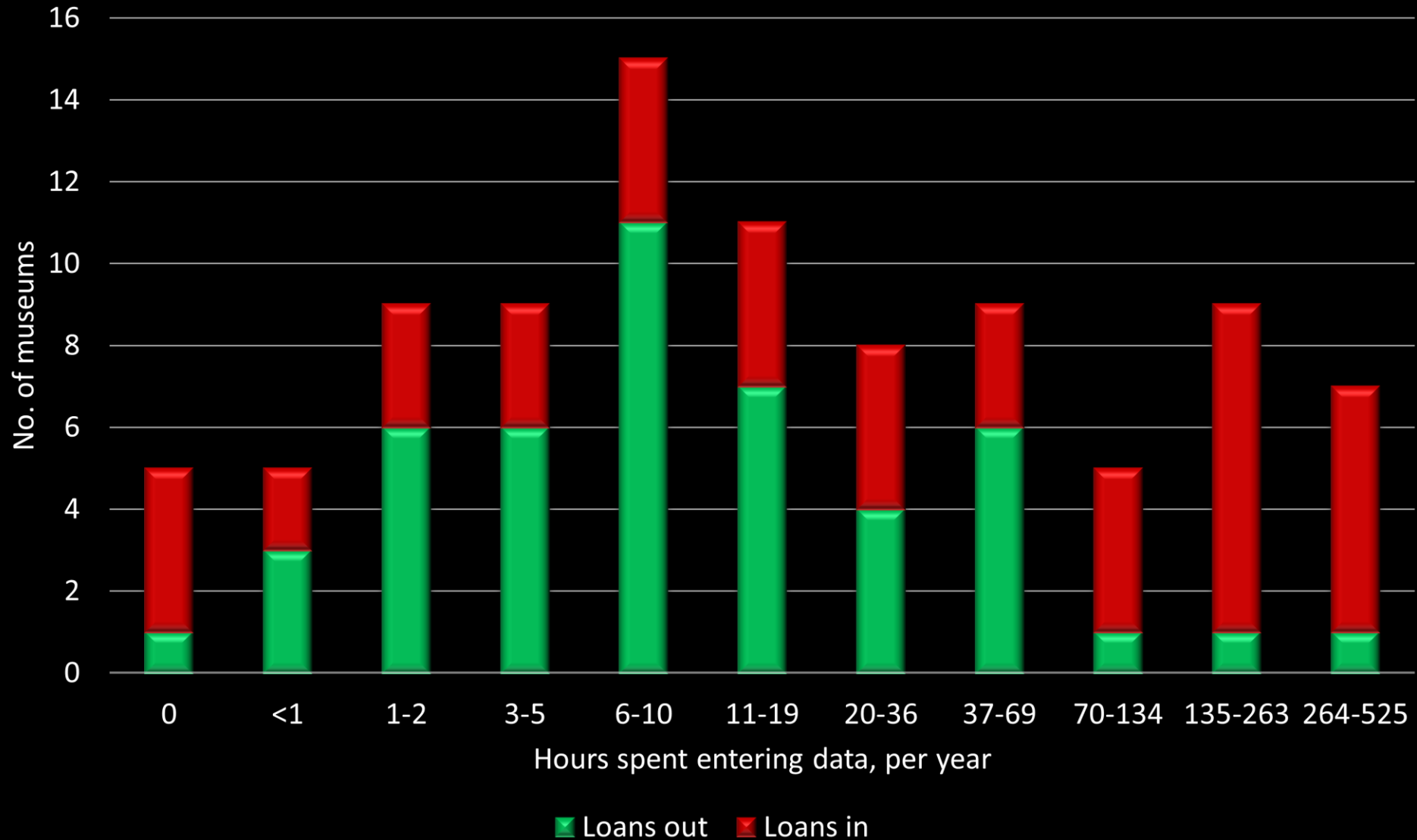
Data entry time per year (n=49 (in) / 51 (out))

## Leihgaben

minimum 0.00  
median 8.75  
mean 26.87  
maximum 375.00

## Leihnahmen

minimum 0.00  
median 33.33  
mean 88.85  
maximum 525.00



# ...und warum: Zeit

Zeitaufwand für die Dateneingabe von Leihnahmen über den Zeitraum von 10 Jahren:

- Median: 48 days = 0.2 years
- Mean: 127 days = 0.6 years
- Maximum: 750 days = 3.4 years

# Wo stehen wir jetzt?

## Public beta

- LIDO-Profil
- Beispiel-Datensatz
- Proof-of-concept Importer/ Exporter
- Schematron
- Online EODEM-Viewer
  
- In Arbeit:
  - Werkzeuge und Templates

# Wo stehen wir jetzt?

## Weitere Anwendungsfälle für EODEM

- Gestaltung und Ausstattung von Museen und Ausstellungen
- Ausstattung von Vitrinen
- Transportunternehmen
- Versicherungen
- Verteiltes Management der Datenspeicherung
  
- Entwicklung von Apps und Audio Guides



# Nächste Schritte

- Sommer – Herbst/Winter 2022:

Entwicklung von Exportern/Importern

# Nächste Schritte

axiell

 **GallerySystems**  
Collect. Manage. Share.

 Knowledge  
Integration

**\_KulturIT**

 modes

**MUSOFT**  
part of the Axiell Group

 SISTEMAS<sub>Do</sub>FUTURO

 Userix Oy

 zetcom

# Nächste Schritte

Firma	Produkt	Exporter	Importer
axiell	Axiell Collections, Mimsy XG	In Entwicklung	In Entwicklung
axiell /  MUSOFT <small>part of the Axiell Group</small>	Museion	In Entwicklung	Möglicherweise
 GallerySystems <small>Collect. Manage. Share.</small>	TMS	Geplant	In Entwicklung
 Knowledge Integration	CIIM	Geplant	Nein
<b>_KulturIT</b>	Primus, DigitaltMuseum	In Entwicklung	In Entwicklung
 modes	Modes	In Entwicklung	In Entwicklung
 SISTEMASdoFUTURO	in arte, in patrimonium	Geplant	Nein
 Userix Oy	Collecte	Geplant	Möglicherweise
 zetcom	MuseumPlus	In Entwicklung	In Entwicklung

# Nächste Schritte

- Sommer – Herbst/Winter 2022: Entwicklung
- Herbst/Winter 2022: stabiles Release von EODEM 1.0
  - European Registrars Conference – 3.-5. November 2022

# Ressourcen

- Homepage: <https://cidoc.mini.icom.museum/working-groups/documentation-standards/eodem-home/>
  - FAQs
  - Präsentationen
  - Implementierer
- EODEM file viewer: <https://cidoc-dswg.org/eodem/>
- Input zu den monatlichen Meetings <https://rupertshepherd.info/contact>

**Fragen Sie Ihren Softwareanbieter!**

# Warum EODEM nutzen?

- Es kann helfen Zeit zu sparen
- Es kann die Datenqualität verbessern
- Förderung der Nutzung von Standards in CMS

**Zeit sparen!**



<http://cidoc.mini.icom.museum/working-groups/documentation-standards/eodem-home/>

Jette Klein-Berning

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zetcom GmbH

@icomCIDOC | #EODEM

