

# Usability study for Digital Repositories' applications

February – March 2020

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Web-usability tests between February and March 2020 evaluated the repository platform [InvenioRDM](https://inveniosoftware.org/products/rdm/) (<https://inveniosoftware.org/products/rdm/>). More precisely, the study covered the "Landing page", where we see an uploaded work and the "Deposit form", which is the form to upload works.

This report is focussed on the improvement areas of the evaluated pages. I would like to say *thank you* for the existing Mockups provided by the InvenioRDM developers on which my work was based.

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## 1. Description of the InvenioRDM software

A new software is in development at CERN; InvenioRDM (Research Data Management). The project has two main goals:

- To develop a **repository platform** based on the [Invenio Framework](https://inveniosoftware.org/products/framework/) (<https://inveniosoftware.org/products/framework/>) and the open-access repository [Zenodo](https://www.zenodo.org) (<https://www.zenodo.org>),
- To grow a **community** of researchers and research institutions.

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## 2. Community (disciplines, navigation culture)

The interface has a modern, clear-out look. Very easy to navigate, the homepage reminds us of Google, which is very trendy and popular today. Advanced research is compatible with other repositories or catalogs, which is very practical, usually pretty close to Zenodo.

The target audience is therefore very broad: from physicists to software developers; and the deposited "documents" or "works" are very diverse: from reports, articles, to software, code-strings.

### 3. Base material (existing Mockups)

The work consisted in analysing Mockups done by the project team, discuss them with the Project Leader Lars Holm Nielsen. In the following you will find descriptions of the two pages: "Landing page" and "Deposit page" with my personal observations.

#### Review of the Landing page

The screenshot shows the InvenioRDM landing page for the record 'SkyNet: A modular nuclear reaction network library'. The page includes a header with the repository name, a search bar, and navigation links. The main content area displays the record title, authors (Lippuner, Jonas and Roberts, Luke F.), a 'Send message' button, a citation, keywords, a description, a license, a preview section (currently empty), a file list, and a details section with metadata. The right sidebar contains metrics (3,113 views, 420 downloads, 70 citations), versions, communities, and export options. Several callout boxes with arrows point to specific elements on the page, providing feedback and suggestions.

**Annotations and Callouts:**

- Search like in GitHub that allows easily to search both community only or all of:** Points to the search bar.
- "Advanced search" option in the menu, just maybe right + here would be nice. Like at the Tronpage or "Deposit - Protection v2" - so no click back or no simple research before to have access to advanced.** Points to the 'Advanced search' link.
- Send message - should require login to be able to send a message (to avoid spam). Could go to either uploader or/or curator. Send as a simple email, with no storage on server.** Points to the 'Send message' button.
- Citation very central - could also just be moved to right sidebar as currently.** Points to the citation text.
- No tabs - in general we've tried not to have tabs or hidden content on page, to avoid that users have to click multiple times to access and find content.** Points to the 'Advanced search' link.
- All metadata listed here (could potentially be very long).** Points to the 'Details' section.
- Primary community branding (only displayed if record has a community):**
  - Community manager (can just background color (default should likely be gray))
- No altmetric by default - but should be easy to enable.** Points to the 'Metrics' section.
- If altmetric can't be integrated, would be possible to make an icon visual thing with forms and colors? That the user have an impression less than in a second, about the permanency of the article. PS: Visual ideas following next week.** Points to the 'Metrics' section.
- A thing like a "like" or a heart icon would be a thing for the Metrics menu, or it's too much social media style?** Points to the 'Metrics' section.
- Secondary communities** Points to the 'Communities' section.

## Landing Page

The page itself is logical and clear. The most relevant information one could see at the top of the page, without the need to scroll or click. The *Community* appears in the header, the publication date, version number, title, contributors and contact, identifier, citation (ready to copy in different styles), keywords, description and license are all included in the main part of the page. By scrolling down, there is a preview of the work, the list of files and the metadata. The page also has a right-sidebar, containing metrics (with numbers of *views*, *downloads* and *citations*), list of former versions, list of communities, index information (OpenAIRE) and export formats.

### Observations

The new Mockups integrated the input received and developed further suggestions:

- Based on input comment "No altmetric by default - but should be easy to enable.", a work stream visualization spell is requested, either a visualization of the set of "views", "downloads" and "citations" just like [altmetric \(https://www.altmetric.com\)](https://www.altmetric.com) (or altmetric integrated), which gives a metric of these three elements altogether. Or, an own developed visualization with the three elements distinguished. - The idea of own developed metrics with the three elements separated was the most preferred by the service managers.
  - Direct accessibility to advanced search.
  - If the metadata can be long, a Jump up button could be added.
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## Deposit page

This is the page used to upload a new work on the repository. It is a really complex page and quite long. It asks for all the information about the work, which is required for an efficient identification afterwards. Despite the page being long, I stand by this concept, rather than using a shorter page which requires one to click to next steps. As the page is complex, I only mention the section I worked on, rather than the entire page.

### Observations

- At the point "Identifiers", I found some ambiguities, which need more explanation. I suggest a different order of a few points.
- "Edit contributor" needs a field to add contact to each contributor = making it possible to contact each other and not only the uploader.
- In the "Protection" window the embargo is not clear enough and needs explanation.
- Point "Related work" needs more explanation and may find a smarter solution for "References".

# Review of the Deposit page

Do we need something smarter? Everybody ask for emails of the contributors.

## 4. New Mockups and intermediate exchanges

### Progression of the Mockups

This chapter follows the evolution of the presented Mockups, with intermediate exchanges between **Maria Dimou**, my supervisor and **Lars Holm Nielsen**, who is in charge of the project and myself. Lars asked me to focus on the **metrics** on the landing page and on the **identifier part** of the deposit page primarily. Secondly, as far as possible, the whole deposit and landing page.

I tried to make the ideas about the changes, and the new mockups as a whole, clearer with virtual "sticky notes".

### Metrics

The possibility to create own metrics was very appealing. In my first drafts, I proposed several varying forms. They are mostly within the same range of colours, because my first priority was only selecting the form. Most of the Mockups were done using Balsamiq, except the circles. The coloured circles were made first with Gimp and integrated in Balsamiq.

### Loupes

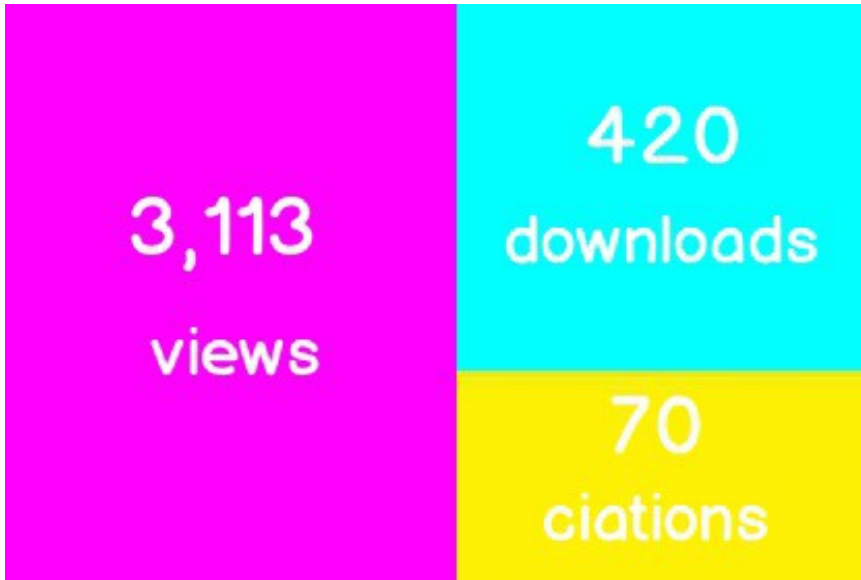
I associated to the logo of Invenio with the loupes (magnifying lenses).

1. The size of the metrics is related to the currency of the work.
2. The shade or degree of the colours are related to the currency of the work.



### 2D boxes

The box size attributed to the entire metrics is fixed. The size of the individual metrics' box can change in proportion to each resulting number.



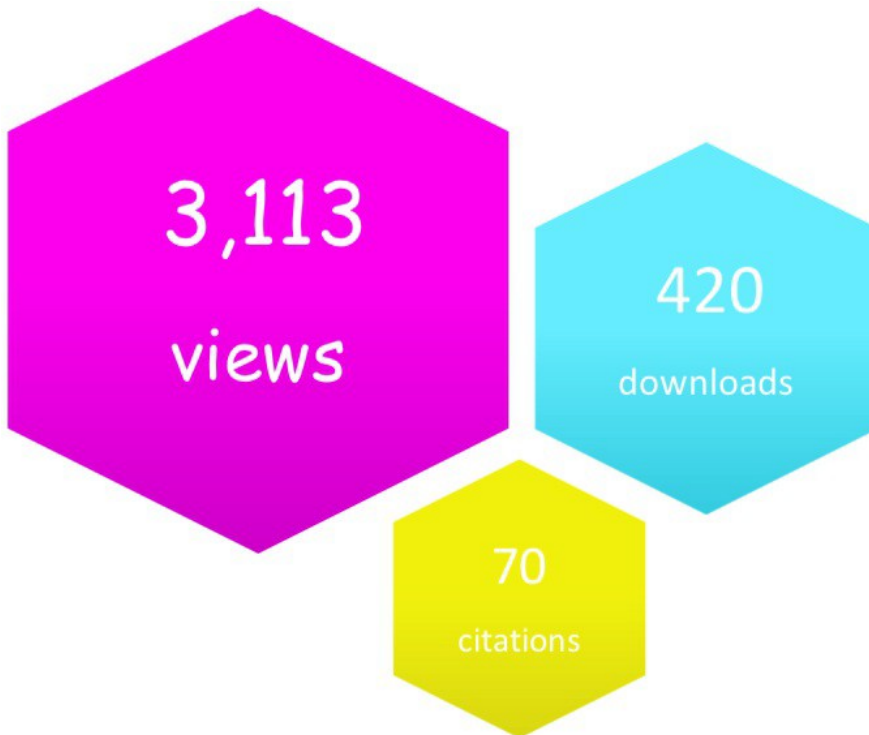
### 3D boxes

The size of the boxes or the degree of the colour is alterable by the currency of the work.



## Hexagons

The hexagons came from the idea of 3D boxes, placing them in a way to use the available space better on the right sidebar.



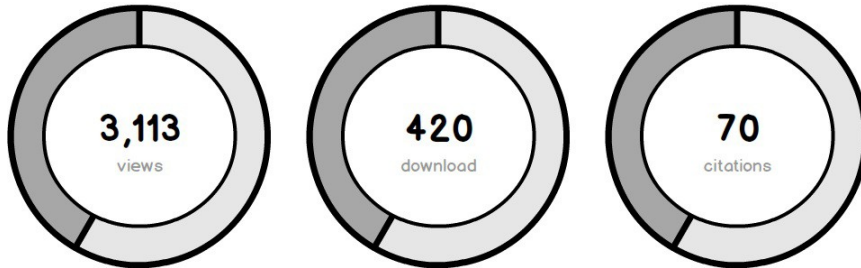
With the colours of InvenioRDM:





## Circles

The template is from Balsamiq, but the coloured version is made with GIMP. The metric follows the schema like the odometer of a car, filling up gently, foggy in the circle, from left to right. Upon reaching the 100.000 the circle is closed.



i would choose three colors for the three analyses to replace the dark grey area. The light grey area i would leave white and without edge. May like.



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In the intermediate meeting of the 13th of February, the forms of the metrics were discussed, and several principles became clear.

- The **metric could not grow**, because the place available for displaying the metrics is limited, so all the ideas with growing visualisation are disqualified.
- It is necessary to find universal colours, like an entire **rainbow**, because both the logo of the community (which will be mentioned in the work) and the metric will be present on the top of the same page. The colours of the metrics need to be compatible with the logos of the communities, which are of a wide and rich variety.
- The form of **circle or spiral** was the most voted.

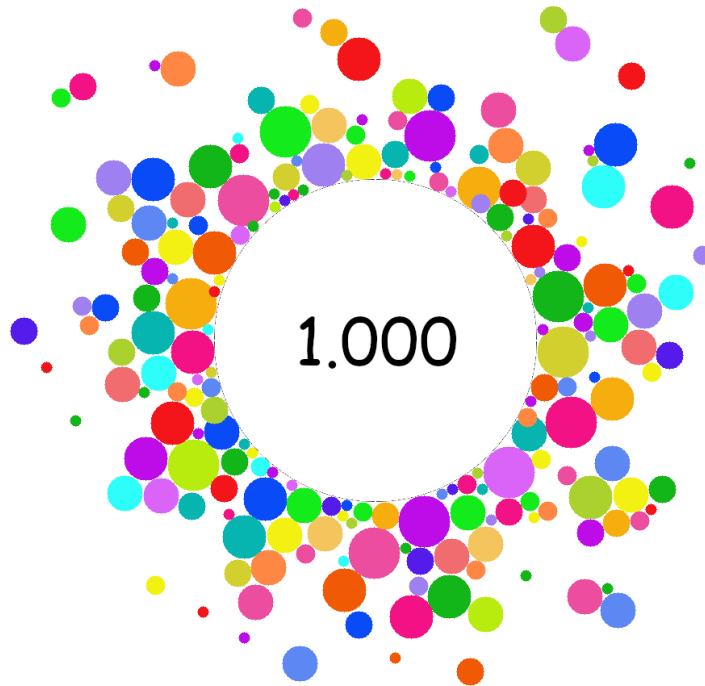
---

Upon reflexion of the feedback received, based on research on the internet for inspiration, I prepared the following metrics:

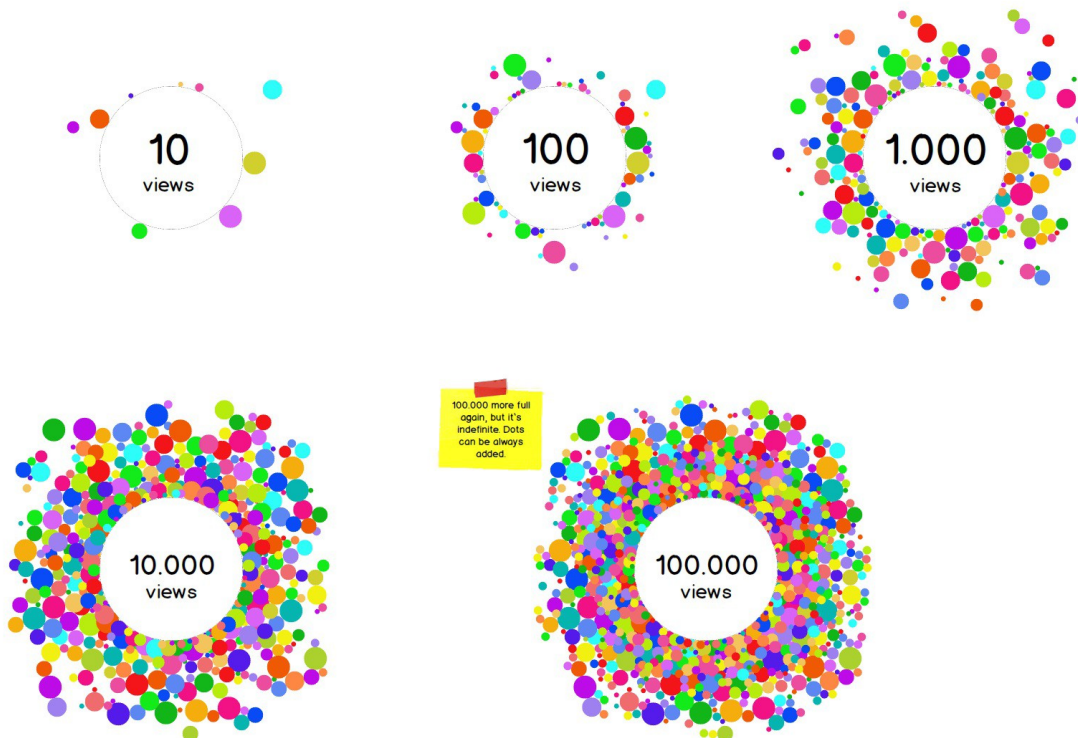


### RM 1 - Rainbow metrics 1: Circle with dots

The more views there are, the more dots are given around a circle, in an eclectic way. The score of the metric is placed in the middle. This option is without limit, it is possible to continue to add dots infinitely.



### Rainbow metrics : Circle with dots

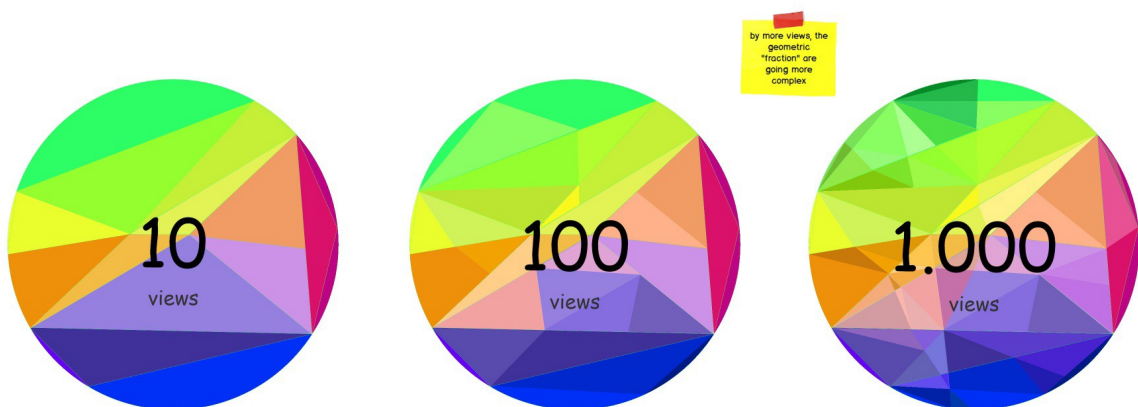


## RM 2 - Rainbow metrics 2: Triangles in circle

The rainbow is true to the circle. The logic of the visualisation is, the more views there are, the more complex the geometric fractions.

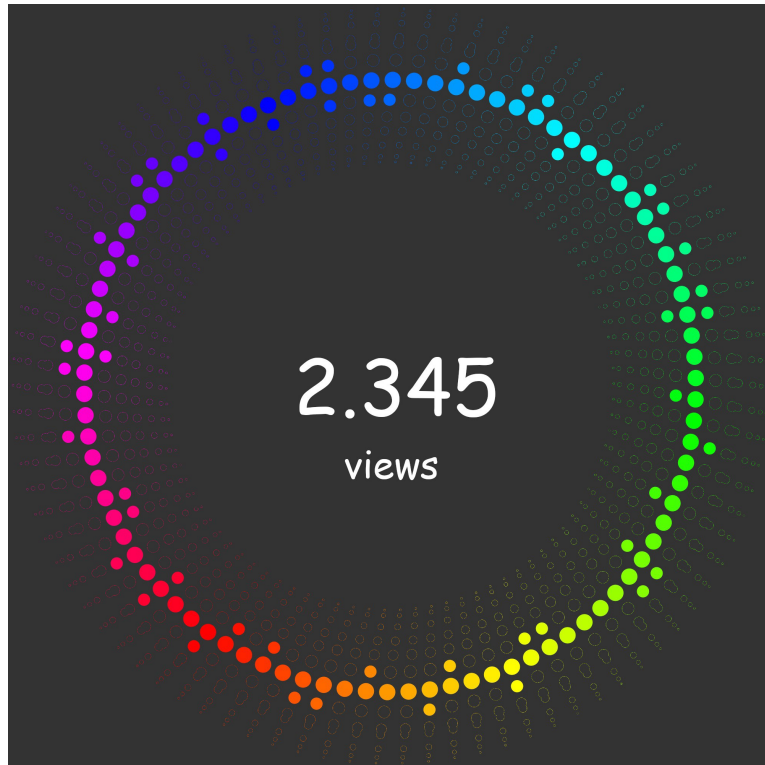


### Rainbow metrics : Triangles in circle



### RM3 - Rainbow metrics 3: 3D ring black

The rainbow holds true to the ring. Up to the first 1000 views the main ring is filled up in the middle. Exceeding 1000 views and up to 10.000 views the two rings on either side of the main ring fill. Once 100.000 views is reached the entire ring is filled, giving a 3D effect.



Rainbow metrics : 3D ring black

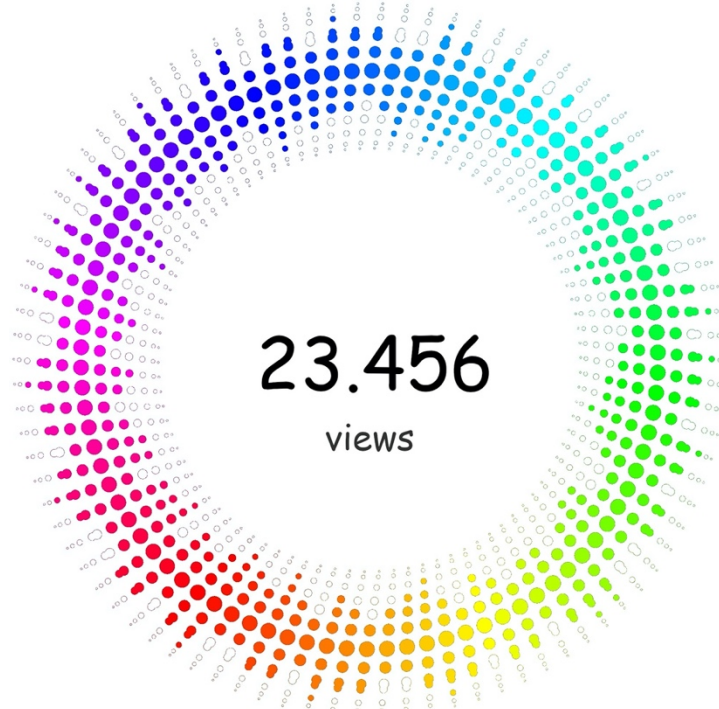


source : <https://www.deviantart.com/hasewen/art/Fractal-006-Rainbow-circle-36625920>

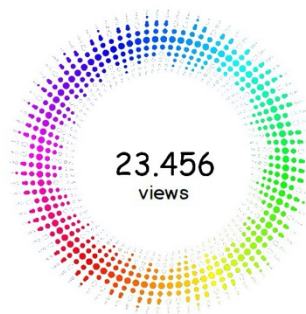
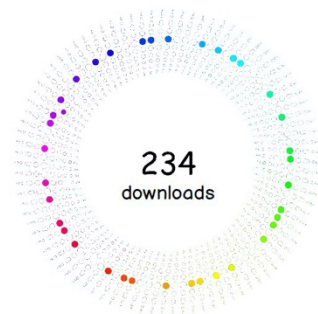
## RM4 - Rainbow metrics 4: 3D ring white

3D ring in white, has the same concept like in black.

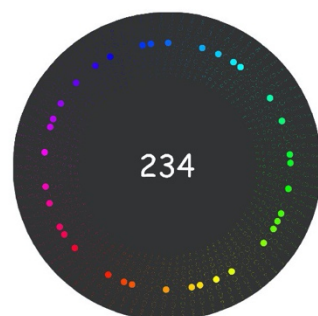
The [black 3D ring](https://www.deviantart.com/hxseven/art/Fractal-006-Rainbow-circle-36625932) (<https://www.deviantart.com/hxseven/art/Fractal-006-Rainbow-circle-36625932>) is retrievable on the web with [free script](#) ([http://www.jonasjohn.de/lab/context\\_free/fractal\\_006\\_rainbow\\_circle.cfdg](http://www.jonasjohn.de/lab/context_free/fractal_006_rainbow_circle.cfdg)).



Rainbow metrics : 3D ring white



Black circle / black donut





Some other options to present the 3D ring: in a black circle or in black donut.  
**Placing of the metrics**

After a discussion with Lars, I created some options for how it could be presented on the landing page, so it is possible to see all three metrics (views, downloads, citations) displayed visually.

Version 1 of the metrics position gives the option that we can see one metric at the time, for example views. By clicking on the other dots below the metric, we can change to downloads and to citations.

Version 2 has the same method, with little ears on the two sides of the metric.

In version 3 we see two metrics simultaneously. The (more numerous) views are larger and it displays downloads in a smaller metric.

The screenshot shows the InvenioRDM interface for the 'SkyNet: A modular nuclear reaction network library'. The header includes 'InvenioRDM' with a search bar and 'Biodiversity Literature Repository'. The main content area displays the title, authors (Lippuner, Jonas and Roberts, Luke F.), data collector, contact information, citation, style, keywords, and a detailed description. On the right, a 'Metrics' section features two circular gauges: a large one for '23,456 views' and a smaller one for '234 download'. A yellow callout box with a red arrow points to these metrics, stating 'Metrics for views and downloads, shows the same time.' Below the metrics is a 'Versions' table and a 'Communities' section.

Version	Date
Versions v1.15.0 10.1234/abcd-3414	21 Jun, 2020
Versions v1.14.0 10.1234/abcd-3414	01 Jun, 2019

## DOI and other identifiers

For simple retrieval and identification without ambiguity, the identifiers are an important factor. As mentioned before, in my view, this part was missing a part with explanations and a simpler way to ask for the information.

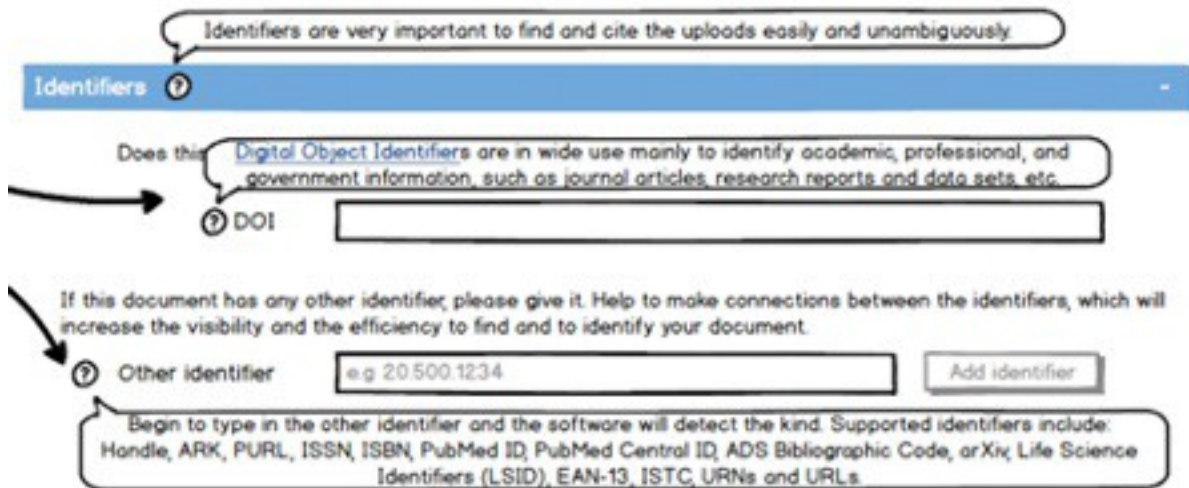
The original version of "Identifiers" section on the "Deposit page":

The screenshot shows the 'Identifiers' section of a deposit page. It features a 'Register DOI' toggle switch, a 'Reserved DOI: 10.1234/abcd-3413', and a text input field labeled 'Identifiers' containing 'DOI, Handle, ARK, ...'. Below the input field is a '+ Add identifier' button.

In the option *Register DOI* it was unclear, when one needs to register, and when not. If one has a DOI, gives it in the field and then clicks on the register what will happen? Or if one doesn't have a DOI and doesn't register, will the work be uploaded without any identifier?

I tried to make the explanation shorter and simpler. I also split it clearly in two parts: "DOI" and "Other identifier" and created three help icons with explanation.

- One to encourage the user to take care of an identifier;
- A second one to inform the user, what a DOI is for, with a Wikipedia link;
- Description of how-to detecting field works for "Other identifiers" and a list of supported identifiers.



First, focus on the DOI part. One simply asks the uploader, if the work (document) already has a DOI. If the answer is 'yes', the user simply has to fill out the field for the DOI identifier below.



If the contributor selects the answer 'no':

- Step 1.1 : a button appears, to "Get DOI now!". It is less definitive than "Reserve a DOI", so the contributor is less afraid to click on it.
- Step 1.2 : Once the contributor has clicked on "Get DOI now!", the DOI field is filled out and the button changes to "Your DOI is reserved". Here I kept the word "reserved". With this the contributor can be sure the DOI will not change again and can put it also on their work before they drag and drop in the upload field, if she/he would like to do so.



## Alternative step 1.1 - Answer No

Identifiers ?

Does this document already have a DOI?  Yes  No

? DOI

? Other identifier

*If the answer is no, a button appears: Get DOI now!*

## Alternative step 1.2 - DOI reserved

Identifiers ?

Does this document already have a DOI?  Yes  No

? DOI 10.5072/zenodo.499761

? Other identifier

*By clicking "Get DOI now!", a DOI would be reserved automatically*

For the "Other identifiers" I prepared different versions.

- V1 a classic one with scroll down menu, like you can see above;

Identifiers ?

Does this document already have a DOI?  Yes  No

? DOI

? Other identifier 

Handle	<input type="text" value="e.g 20.500.1234"/>	<input type="button" value="+ Add"/>
ARK		
PURL		
ISSN		
ISBN		

*By clicking "Get DOI now!", a DOI would be reserved automatically*

- V2 a style like to choose the credit card with checkboxes;

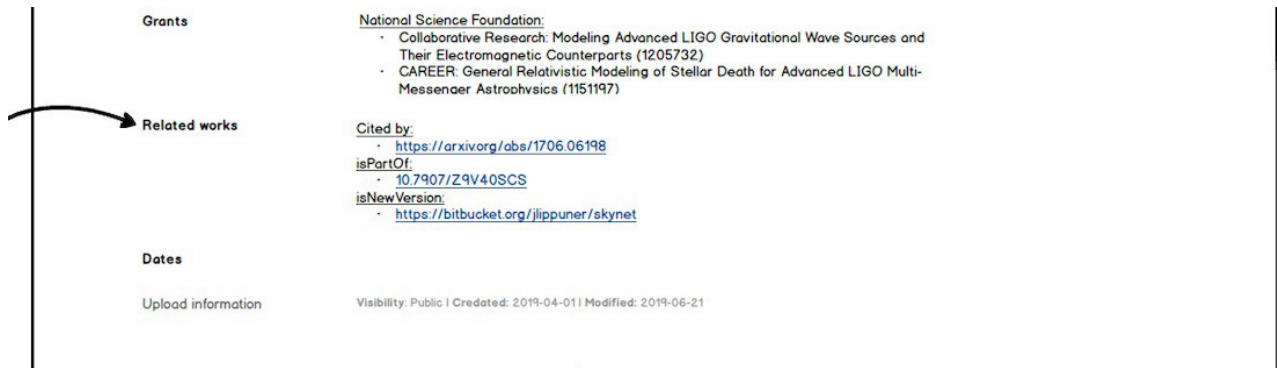
- and V3 a smarter one, which detects the type of the identifier while typing it in.

After I determined that there are no special technical difficulties, I decided to stay at V3. The simplest and smartest solution.

### Landing page

A few little things were added to the landing page, like “advanced search” on the top of the page:

I changed some of the wording on the page too, to remove any ambiguities : "Related identifier" (displays a list of other works, which are related to the work on the landing page) changed to "Related works", to use the same expression like on the deposit page.



The image shows a screenshot of a metadata page. On the left side, there is a vertical line with a label "Related works" and an arrow pointing to the right. The main content area on the right contains the following information:

- Grants**
  - National Science Foundation:
    - Collaborative Research: Modeling Advanced LIGO Gravitational Wave Sources and Their Electromagnetic Counterparts (1205732)
    - CAREER: General Relativistic Modeling of Stellar Death for Advanced LIGO Multi-Messenger Astrophysics (1151197)
- Cited by:**
  - <https://arxiv.org/abs/1706.06198>
- isPartOf:**
  - [10.7907/Z9V40SCS](https://arxiv.org/abs/10.7907/Z9V40SCS)
- isNewVersion:**
  - <https://bitbucket.org/jlippuner/skynet>

Below this information, there are sections for "Dates" and "Upload information". At the bottom right, it says "Visibility: Public | Created: 2019-04-01 | Modified: 2019-06-21".

A message window is also proposed, for sending messages to different contributors, and not only to the uploader. (See photo at Deposit page / Contributors message / Send message)

# Deposit page

The screenshot shows the InvenioRDM Biodiversity Literature Repository deposit page. The page is titled "Draft" and includes a navigation bar with "Uploads" and "Communities" links. The main content area is divided into several sections:

- Files:** A section for uploading files, with a "Choose files" button and a "Request quota increase" link. A note indicates that storage is available up to 308 out of 1008.
- Identifiers:** A section for adding identifiers, including a field for DOI and a field for "Other identifier" (e.g., 20:500:1234). A note explains that Digital Object Identifiers (DOI) are used to identify academic, professional, and government information.
- Basic information:** A section for providing basic details, including Title, Contributors (e.g., Nielsen, Lars Holm (CERN)), Resource type (e.g., Text > Journal article), Subjects (e.g., MeSH Subject A, MeSH Subject B), Description, Language (e.g., English), Publication date, and License (e.g., Creative Commons Attribution 4.0 International (CC-BY 4.0)).
- Recommended information:** A section for adding recommended information, including Dates, Version, Publisher, Related work, and References. A note explains that related work helps to build links between documents to win more visibility.
- Funding:** A section for adding funding information, including Awards (Funding organisation, Award number/acronym/name).
- Geographical locations:** A section for adding geographical locations.
- Journal, conference and book information:** A section for adding journal, conference, and book information.
- Darwin Core:** A section for adding Darwin Core information.

On the right side of the page, there are several sections for managing the record:

- Protection:** A section for managing access, including options for Public, Private files, and Apply embargo (e.g., 6 months or till). A note indicates that if the new version of "Editing Contributors" is validated, it is not necessary to keep "Allow users to contact me" or move this option to the profile.
- Sharing:** A section for sharing the record, including a "Share with..." button and a "Contact support" button.

At the bottom of the page, there is a footer with "Powered by InvenioRDM" and links for Status, Privacy policy, Terms of use, and Support.

In details: check on the Mockup "Identifiers 1/2 - DOI"

Three versions see in the Mockups "Identifiers 2/2 - Other identifier" (V1, V2, V3)

Editing Contributors see in the Mockups "Editing Contributors" and "Message window"

Subject up to "Basic information", just before Description.

Language up to "Basic information"

"Related work" and "References" moved up to "Recommended information"

If the new version of "Editing Contributors" is validated, not necessary to keep "Allow users to contact me", or move this option to the profile.

Title and Contributors on the top of Basic information, Resource type as third.

No ↕ Regardless of the order of adding references => use automatically alphabetic order on the landing page.

Drag and drop for reference packet. By using a Reference Management System, like Zotero, Mendeley etc. it seems very easy and fast to import all the references in rtf or other format. The formats are just ideas after checking out the most popular Reference Management Systems.

## Contributors message

This part, in my opinion, could be important, to make it possible for users and contributors to contact each other about different works. So, I added an email field and the "Ask for confirmation" button. This form enables the optionsto:

- add the contact of the contributor:

# Edit contributor

The screenshot shows a web form titled "Basic information" for editing a contributor. The form includes fields for "Title", "Family name", "Given name(s)", "Name type", "Role", "Affiliation(s)", "Name identifiers", and "Email". A "Save" button is present, along with "Cancel" and "Remove" buttons. A callout bubble points to the "Ask for confirmation" button, stating: "To save the email: ask your contributor, to allow to receive messages from other users or researchers in relation to this document." Three yellow sticky notes provide additional context: 1. "Possibility to give different Id, for example ORCID, Researcher ID, Scopus Author ID, etc. Use the same way like for the document identifiers, detect the kind." 2. "Should be this message sent may only first time? If the contributors email is already registered in the system, not asking again to allow, but inform that she/he's mentioned as contributor and she/he's got the status 'allow messages' or 'don't allow messages' and a link to change the status. Or! Should we have the choice at every document? E.g. for a document i would like to allow messages, but for an other not? Does it make sense?" 3. "An email would be sent to the contributor : to allow to get messages from other users. Until the confirmation or choosing 'don't allow' any messages, her/his name would be not attached in the contact form. See Landing Page : Send message".

**Basic information**

Title \*

+ Add titles

Contributors \* Creators: Nielsen, Lars Holm (CERN) | +

**Edit contributor**

Family name	Given name(s)	Name type	Role
<input type="text"/>	<input type="text"/>	Person	Creator

Affiliation(s)  + Add affiliation

Name identifiers  + Add identifier  
e.g ORCID, Researcher ID, Scopus Author ID, etc.

Email   ?

Possibility to give different Id, for example ORCID, Researcher ID, Scopus Author ID, etc. Use the same way like for the document identifiers, detect the kind.

To save the email: ask your contributor, to allow to receive messages from other users or researchers in relation to this document.

Should be this message sent may only first time? If the contributors email is already registered in the system, not asking again to allow, but inform that she/he's mentioned as contributor and she/he's got the status "allow messages" or "don't allow messages" and a link to change the status.

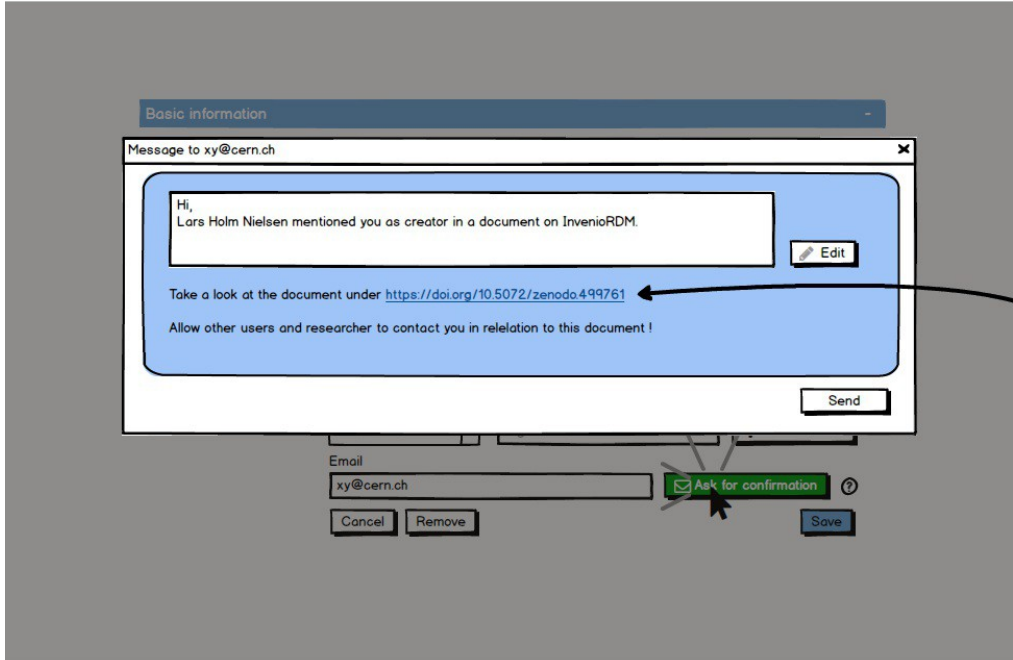
Or! Should we have the choice at every document? E.g. for a document i would like to allow messages, but for an other not? Does it make sense?

An email would be sent to the contributor : to allow to get messages from other users. Until the confirmation or choosing "don't allow" any messages, her/his name would be not attached in the contact form. See Landing Page : Send message

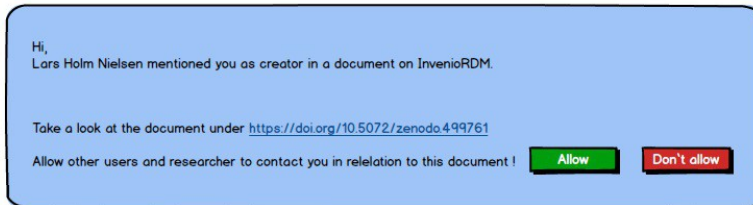


- the contributor to allow or refuse receiving messages

## Message window to allow the contact



### How the message shows up at the contributor



- allow users to send a message without disclosing the email address of the contributors (from the landing page):

## Send a message - unlogged

InvenioRDM Biodiversity Literature Repository

21 January, 2020 | Version 1.15.0

### SkyNet: A modular nuclear reaction network library

Lippuner, Jonas<sup>1</sup> Roberts, Luke F.<sup>2,3</sup> [show affiliations](#)

Data collector(s)  
Lippuner, Jonas<sup>1</sup>

Contact  
[Send message](#)

Please [Log in](#) or [Sign up](#)!  
You have to be connected with your account to be able to send messages to contributors.

DOI DOI: 10.5281/zenodo.3594204

Citation  
Lippuner, Jonas, & Roberts, Luke F. (2017, October 10). SkyNet: A modular nuclear reaction network library. Zenodo. <http://doi.org/10.5281/zenodo.1008754>

Style [Chicago](#) [IEEE](#) [Science](#) [APA](#) [Cell](#) [Harvard](#) [MLA](#) [Nature](#) [Frontiers](#) [AMA](#)

Keywords  
[Astrophysics](#) [Nucleosynthesis](#) [Nuclear reaction network](#)

Description  
Since the first detections of gravitational waves (GW) from merging binary black holes (BH), there has been a renewed interest in the possibility that at least some of these BHs could be primordial in origin. I will briefly discuss motivations for such primordial black holes (PBHs), formed from the collapse of large over-densities in the early Universe. I will then examine the on-going debate over whether LIGO and Virgo have indeed detected merging PBHs, and what we might learn if they did. Of course, the power of GWs in probing PBHs extends far beyond these 'direct' detections. I will also discuss more indirect probes, such as the stochastic GW background which may be produced along with PBH formation. The observation of GWs has thus opened up a new way to detect and study PBHs and to learn about the physics of the early Universe from which they formed.

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1.000

Versions  
Versions v1.15.0 21 Jan, 2020  
10.1234/abcd-3414  
Versions v1.14.0 01 Jun, 2019  
10.1234/abcd-3414  
[View all 20 versions](#)

Cite all versions? You can cite all versions by using the DOI [10.1234/abcd-3414](https://doi.org/10.1234/abcd-3414). This DOI represents all versions, and will always resolve to the latest one. [Read more](#).

Communities  
[Detection and Classification of Acoustic Scenes and Events](#)  
[Tampere University Audio Research Group](#)

## Send a message - logged in

InvenioRDM Biodiversity Literature Repository

21 January, 2020 | Version 1.15.0

### SkyNet: A modular nuclear reaction network library

Lippuner, Jonas<sup>1</sup> Roberts, Luke F.<sup>2,3</sup> [show affiliations](#)

Data collector(s)  
Lippuner, Jonas<sup>1</sup>

Contact  
[Send message](#)

Please [Log in](#) or [Sign up](#)!  
You have to be connected with your account to be able to send messages to contributors.

DOI DOI: 10.5281/zenodo.3594204

Citation  
Lippuner, Jonas, & Roberts, Luke F. (2017, October 10). SkyNet: A modular nuclear reaction network library. Zenodo. <http://doi.org/10.5281/zenodo.1008754>

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[Astrophysics](#) [Nucleosynthesis](#)

Description  
Since the first detections of gravitational waves (GW) from merging binary black holes (BH), there has been a renewed interest in the possibility that at least some of these BHs could be primordial in origin. I will briefly discuss motivations for such primordial black holes (PBHs), formed from the collapse of large over-densities in the early Universe. I will then examine the on-going debate over whether LIGO and Virgo have indeed detected merging PBHs, and what we might learn if they did. Of course, the power of GWs in probing PBHs extends far beyond these 'direct' detections. I will also discuss more indirect probes, such as the stochastic GW background which may be produced along with PBH formation. The observation of GWs has thus opened up a new way to detect and study PBHs and to learn about the physics of the early Universe from which they formed.

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1.000

Versions  
Versions v1.15.0 21 Jan, 2020  
10.1234/abcd-3414  
Versions v1.14.0 01 Jun, 2019  
10.1234/abcd-3414  
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Cite all versions? You can cite all versions by using the DOI [10.1234/abcd-3414](https://doi.org/10.1234/abcd-3414). This DOI represents all versions, and will always resolve to the latest one. [Read more](#).

Communities  
[Detection and Classification of Acoustic Scenes and Events](#)  
[Tampere University Audio Research Group](#)

Message form fields:  
To: [choose a name]  
Cc: [email of anyone else, e.g. colleagues]  
Subject: DOI: 10.5281/zenodo.3594204 - ...  
Message: [text area]  
Buttons: Cancel, Send

In short, we make contact possible while respecting personal information and privacy. This part corresponds also to the landing page.



## Protection

At the *embargo* part, I found a little ambiguity. The addition of two words and an example in the *Conditions* text, made the embargo phase definition clearer.

The image shows two versions of a 'Protection' settings form. The left version shows the 'Apply embargo' section with a dropdown set to '6 months' and an empty date field. The right version shows the same section but with the dropdown set to '6 months' and the date field set to 'till / /'. Red arrows point from the '6 months' dropdown and the 'Conditions' text area in the left form to the corresponding elements in the right form. The 'Conditions' text in the right form includes an example: 'Describe under which conditions you grant access to the files in the record. E.g. master degree in physics.'

## References

Adding references one-by-one, can be sufficient. In a work that cites about 30 other works, it can unfortunately quickly become discouraging to enter all the sources one-by-one. I realise that today all the researchers are using a Reference Management System, (like Zotero or Mendeley) which helps to paste reference string in any editor (like LO Writer or Word). These systems allow one to export reference packages too, in different formats like RTF, JSON, EndnoteXML etc. I propose, a "reference Drag and drop" option. It would be an extremely efficient solution to upload the bibliography of the work. Like this the researcher is collecting her/his references in a reference management system and is simply required to export the reference package.

The image shows a web interface for adding references. It features a 'Publisher' field, a 'Related work' section with a 'cites' dropdown, an 'Identifier (DOI, Handle, ...)' field, and a 'Text > Journal article' dropdown. Below this is an 'Add related identifier' button and a note: 'Your bibliography appears in alphabetic order once published.' The 'References' section has a 'Reference string' field, a 'DOI, Handle, URL, ...' field, and buttons for '+ Add reference' and 'Upload reference packet'. At the bottom, there is a dashed box containing a 'Drag and drop reference packet' area and a 'Choose files' button. A note points to the 'Choose files' button: 'Check out how to create an export-packet in Zotero or in Mendeley.' Accepted file formats are listed as RTF, JSON, Endnote XML and clipboard.

## 5. Group meeting 9th March (description of groups and principles)

The project group meeting took place in the IdeaSquare at CERN 9:00 to 11:00 AM on the 9th march 2020. 14 people attended.

We have presented the new Mockups for the participants of the meeting; Lars and I began with a short presentation for everyone on the Bigscreen. We didn't explain too much, in order to receive more raw first expression feedback later in the smaller groups.

In the second part, we created three groups, each with a moderator. Every group went in a different quiet corner. Everyone was required to give a short feedback about one thing, before moving to the next person, (or could pass to the next too). This continued in a circle, until there were no more ideas. The moderators were required to stay neutral and take notes directly on a [Googledoc \(https://docs.google.com/document/d/1EZh8xTM9Yiy0xLt06-fMiUS82rkxuwGqHkWnpFgtwHA/edit#heading=h.nycrbdxjpsne\)](https://docs.google.com/document/d/1EZh8xTM9Yiy0xLt06-fMiUS82rkxuwGqHkWnpFgtwHA/edit#heading=h.nycrbdxjpsne). They also enforced the rules and ensured that no one made more than one remark at the time or cut off the feedback of another group member.

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## 6. Extraction of feedback 9th March

### Deposit form

- Several points are unclear, require clearer / better explanation or more "help" icons, e.g. "Drag and drop reference packet" and "Protection" window.
- Few buttons are different from others, they should be uniform. The function of some
- buttons is unclear, such as "Add titles".
- Some buttons like "Save" button are missing.
- Some buttons are not necessary, e.g. "Edit" a contributor.
- The buttons must always be visible, no appearing buttons please. A multiple language
- option/possibility is missing.
- The order of the page is questionable, perhaps the "Basic information" should come before the file drop.

### Landing page

- Titles, buttons and space should be uniform or differentiated in a logical way.

### Metrics

- RM4 : 3D white ring is the preferred version, classified as the most professional visualisation for research data.
  - RM3 : the black-background version is also liked, but is clearly difficult to integrate on a white page
- Seeing the three (or minimum two) metrics (of views, downloads and citations) at the same time would be interesting; one bigger and two smaller. An interactive way would be nice: by passing with the mouse on the smaller, it will grow bigger while the other gets smaller.
- Histogram metric in circle or even square form could be interesting. Use K for thousand
- => not 100.000 but 100K.

- RM1 : "Circle with dots" too unorganized for researchers' repository page, would be too full if the *views* are a large number.
- RM2 : "Triangles in circle" not clear enough and not colour-blind friendly.

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## 7. Conclusion

### Metrics

Displaying two metrics at the same time on the landing page was the preferred option. With the idea from the group meeting, that by passing the mouse over the smaller, it will grow bigger while the other one gets smaller, we can eliminate the problematic visibility of the smaller metrics. It would be possible to have all the three metrics visible with this method.

### DOI and other identifiers

- Change all the expressions "document" to "work", to have zero misunderstanding by associating only the articles and books with the word "document".
- Make the buttons uniform.
- No occasionally appearing buttons: all buttons are visible, and only in disabled state if not usable.
- The version which is detecting the type of the "Other identifier" while typing it in, was endorsed.



The screenshot shows a web form titled "Identifiers" with a blue header bar. Below the header, there is a question: "Does this work already have a DOI?" with radio buttons for "Yes" (selected) and "No". To the right of this question is a button labeled "Get DOI now!". Below this, there are two input fields. The first is labeled "DOI" with a help icon and contains the text "e.g 10.1234/os7r3-23413". The second is labeled "Other Identifier" with a help icon and contains the text "e.g 20.500.1234". To the right of the second input field is a button labeled "Add identifier".