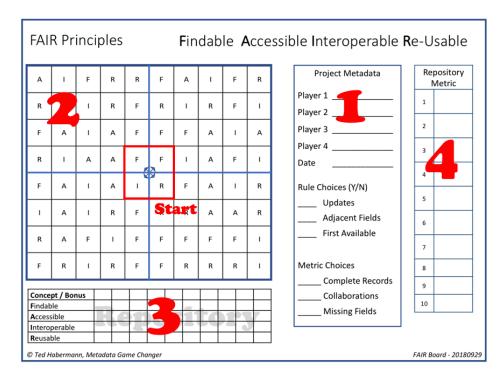# The Metadata Game

Ted Habermann, ted@tedhabermann.com

Your team has been selected for an exciting new FAIR metadata repository project. The goal is to collaborate across the metadata life cycle to create a repository of ten metadata records that include all FAIR elements.

Project Tools

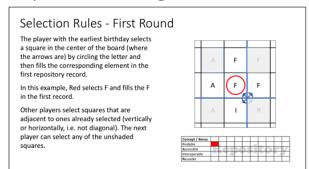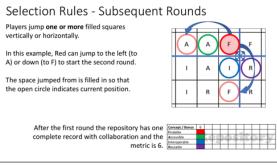Tools are available for

1. tracking project metadata,

2. selecting metadata elements,

3. recording repository content,
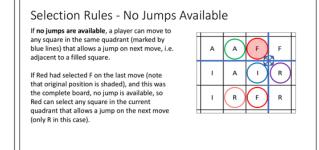
4. recording repository metrics after each round.

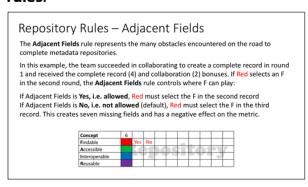Start on one of the squares with the arrows.

Metadata elements are selected when players land on squares on the board. Players movements are controlled by a few simple rules. **Planning these moves collaboratively is critical to team success.**
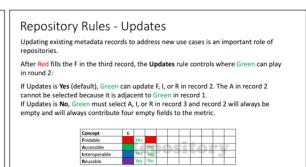
Selection Rules - First Round

The player with the earliest birthday selects a square in the center of the board (where the arrows are) by circling the letter and then fills the corresponding element in the first repository record.

In this example, Red selects F and fills the F in the first record.

Other players select squares that are adjacent to ones already selected (vertically or horizontally, i.e. not diagonal). The next player can select any of the unshaded squares.

Selection Rules - Subsequent Rounds

Players jump **one or more** filled squares vertically or horizontally.

In this example, Red can jump to the left (to A) or down (to F) to start the second round.

The space jumped from is filled in so that the open circle indicates current position.

After the first round the repository has one complete record with collaboration and the metric is 6.

Selection Rules - No Jumps Available

If **no jumps are available**, a player can move to any square in the same quadrant (marked by blue lines) that allows a jump on next move, i.e. adjacent to a filled square.

If Red had selected F on the last move (note that original position is shaded), and this was the complete board, no jump is available, so Red can select any square in the current quadrant that allows a jump on the next move (only R in this case).

There are also rules for building the repository. **These rules need to be considered in team plans along with the selection rules**.

Repository Rules – Adjacent Fields

The **Adjacent Fields** rule represents the many obstacles encountered on the road to complete metadata repositories.

In this example, the team succeeded in collaborating to create a complete record in round 1 and received the complete record (4) and collaboration (2) bonuses. If Red selects an F in the second round, the **Adjacent Fields** rule controls where F can play:

If Adjacent Fields is **Yes, i.e. allowed**, Red must select the F in the second record.
If Adjacent Fields is **No, i.e. not allowed** (default), Red must select the F in the third record. This creates seven missing fields and has a negative effect on the metric.

Repository Rules – Next Available

The **Next Available** rule represents the many obstacles to collaborating on the road to complete metadata repositories.

After two rounds, Red must play an R to start round 3 and Blue must play an A because of jump constraints on the board. Red must play the R in record 3 because it is the only R available in an existing record. The **Next Available** rule controls where Blue can play in round 3:

If Next Available is **Yes** (default), Blue must play an A in record 2 and a collaboration bonus will not be scored for record 2 because two fields were filled by Blue.
If Next Available is **No**, Blue can play the A in record 3, preserving the possibility of a collaboration bonus for record 2.

Repository Rules - Updates

Updating existing metadata records to address new use cases is an important role of repositories.

After Red fills the F in the third record, the **Updates** rule controls where Green can play in round 2:

If Updates is **Yes** (default), Green can update F, I, or R in record 2. The A in record 2 cannot be selected because it is adjacent to Green in record 1.
If Updates is **No**, Green must select A, I, or R in record 3 and record 2 will always be empty and will always contribute four empty fields to the metric.

Metrics are quantitative tools for measuring progress on the project and the goal is to maximize the metric for ten metadata records. Teams can define their metrics depending on the relative importance of completeness, collaboration, and empty fields. There are some default values.

Metric Defaults

Progress is tracked **after each complete round** by combining three repository metrics:

Complete Records have all four fields filled.

Collaborations have four fields filled with one element of each color.

Empty Fields are fields in records that have been started with no content.

Metric Choices
4   Complete Records
2   Collaborations
-1   Missing Fields

The metrics have default values.

= 60

Metric Examples

Calculate the metric **after each complete round** by adding all record bonuses and subtracting the number of empty fields:

Track record bonuses here

One complete record with collaboration = 6.

One complete record with collaboration and four empty fields = 6 – 4 = 2.

The **repository project ends** when no more elements can be legally selected and added to the repository.

The final metric includes all ten records.

Three complete records, one with collaboration = 14.

Repository Rule Defaults

The **Repository Rules** also have default values.

Rule Choices (Y/N)
N   Adjacent fields
Y   Updates
Y   First Available

The **repository project ends** when no more elements can be added to the repository. The final metric includes all ten records.