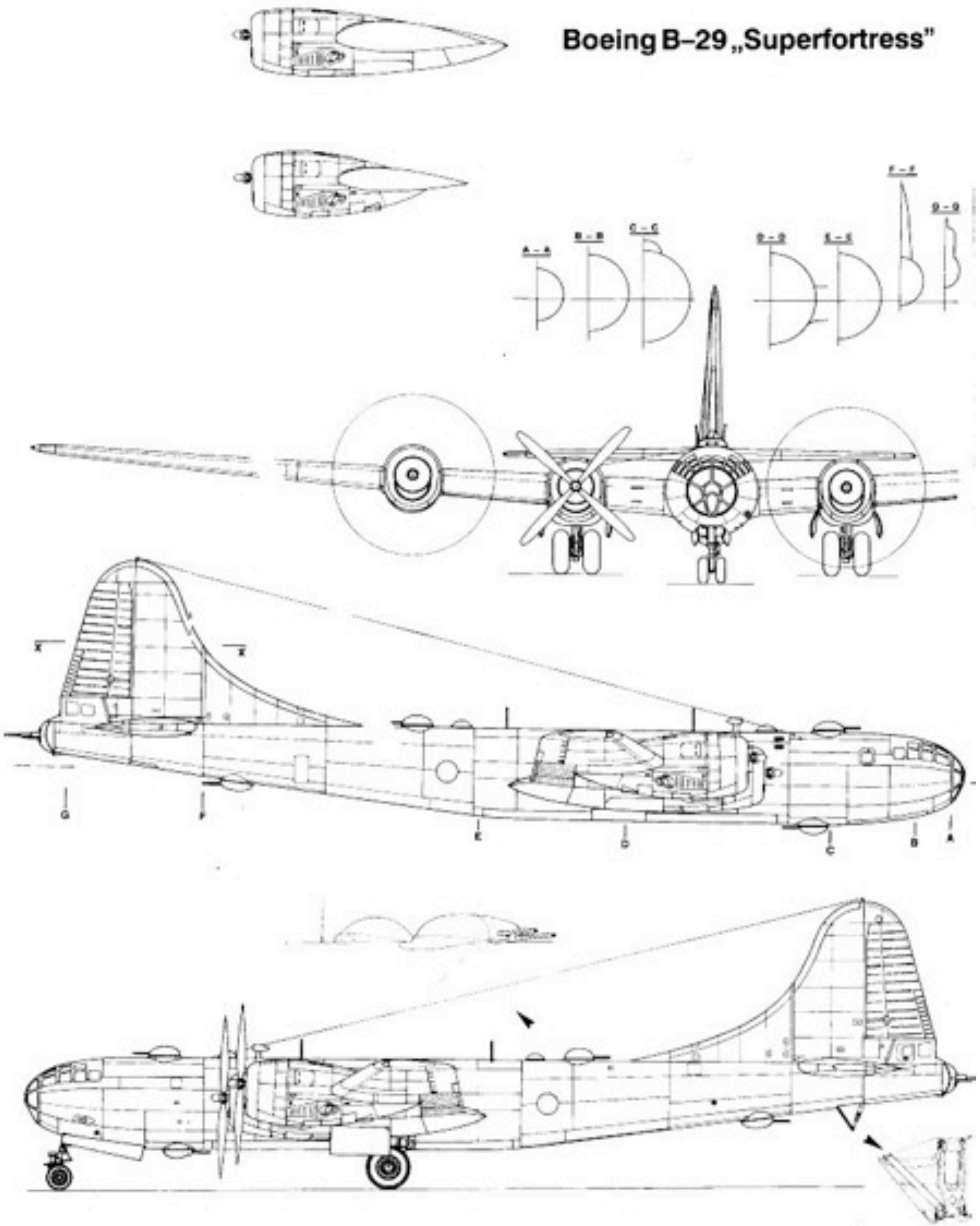
software assessment

tudorgirba.com

B-29

ED STATES AIR FORCE

Boeing B–29 „Superfortress"



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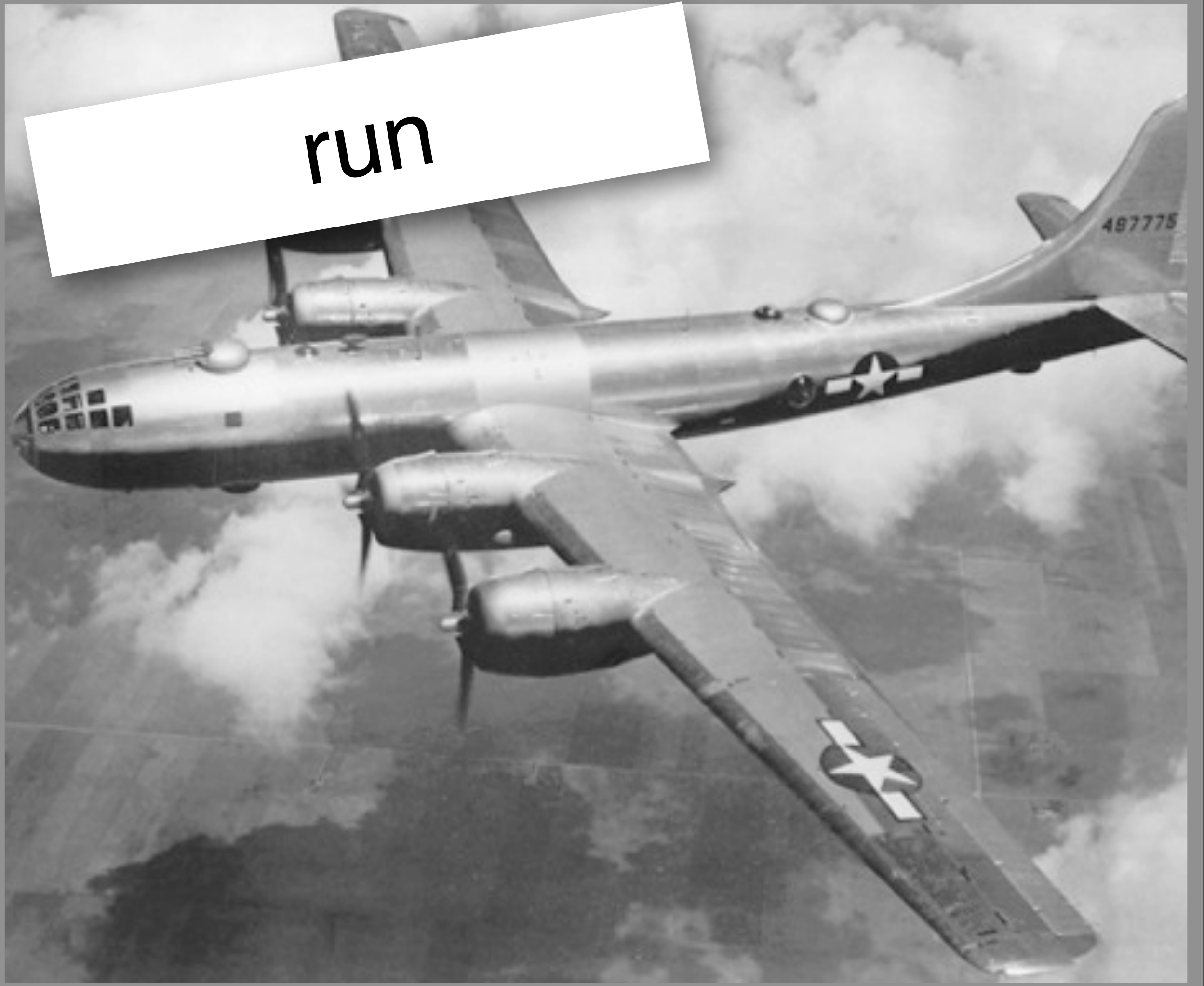
497775

41
41

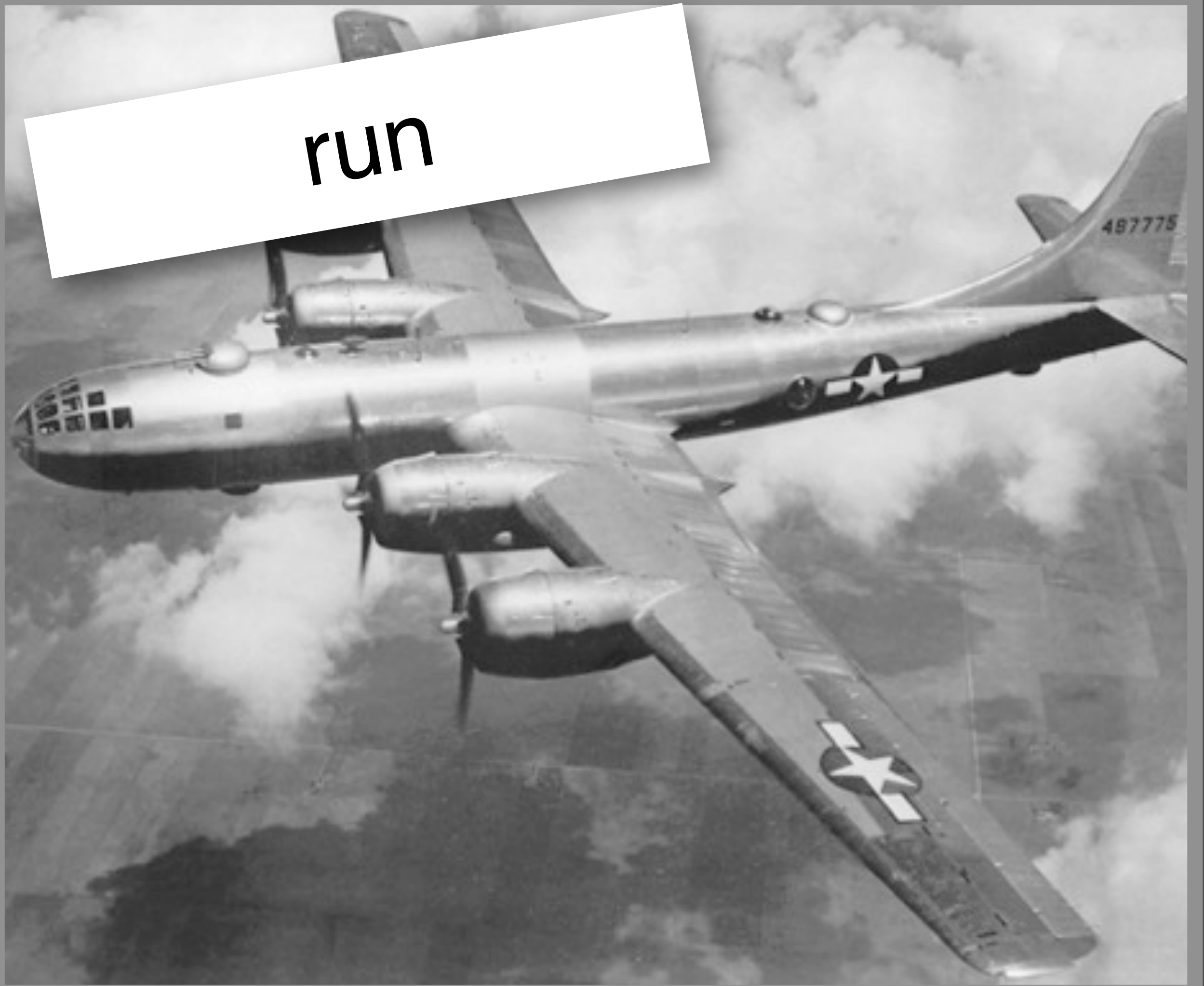
disassemble

disassemble



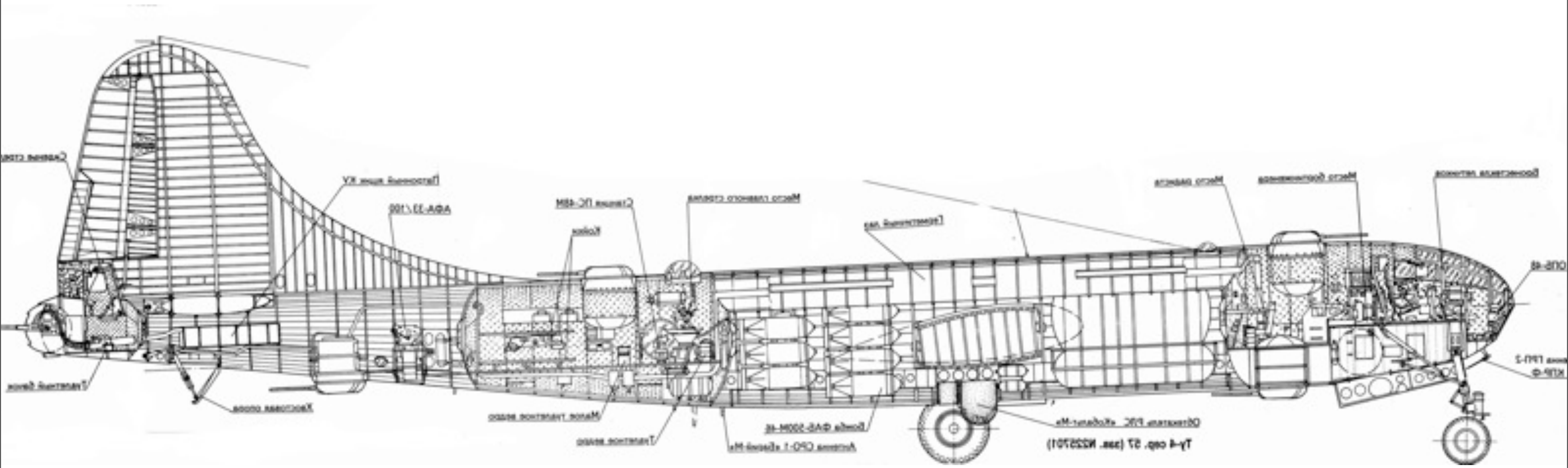
run

disassemble

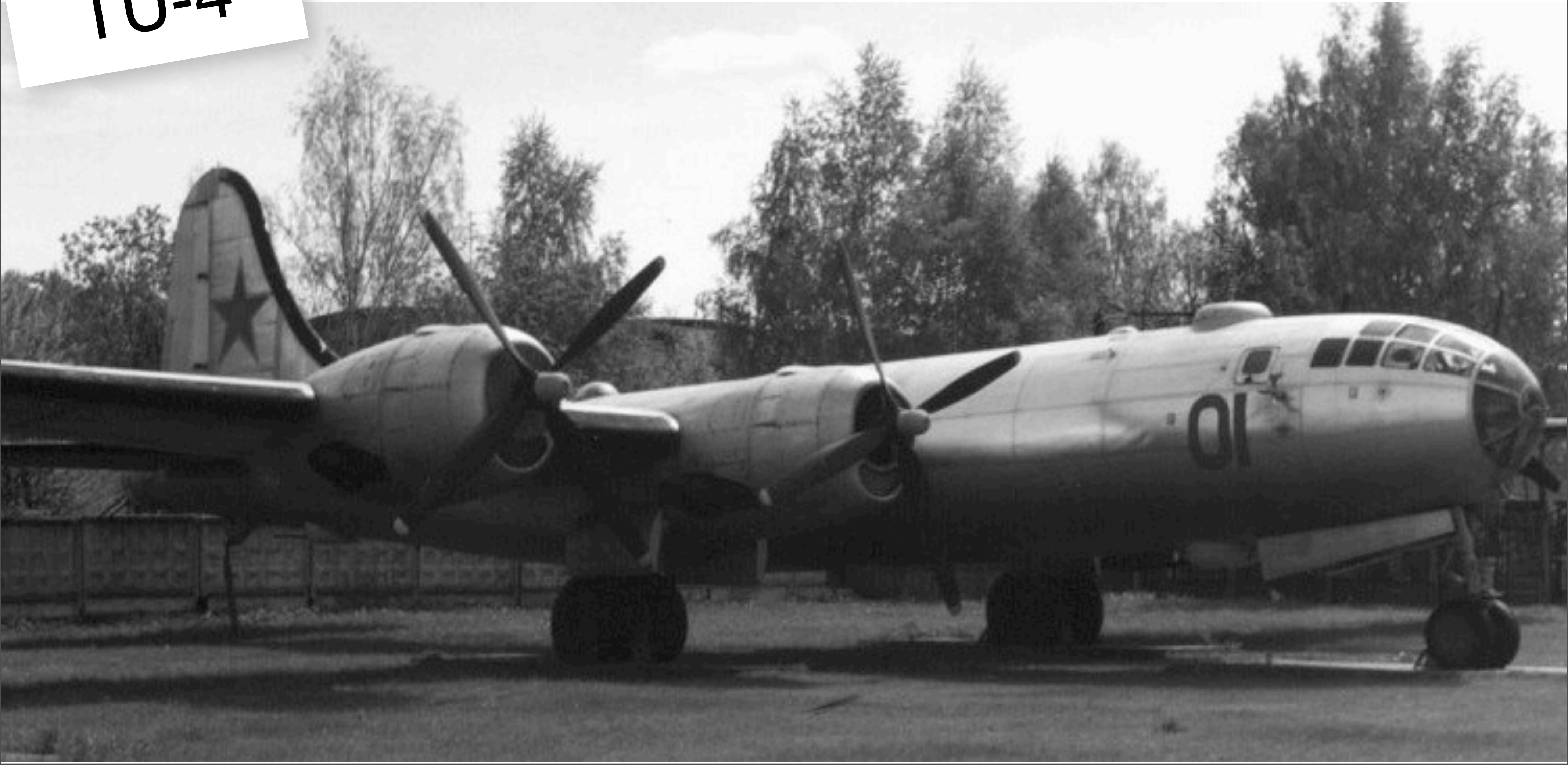


run

test and compare


Сдвижные ств
Патронный ящик КУ
АФА-33/100
Станция ПС-48М
Койки
Место главного стрелка
Герметичный лаз
Место радиста
Место бортмеханика
Бронестекла летчиков
ОПБ-4С
Туалетный бачок
Хвостовая опора
Малое туалетное ведро
Туалетное ведро
Антенна СРО-1 «Барий-М»
Бомба ФАБ-500М-46
Ответчик РЛС «Кобальт-М»
Ту-4 сер. 57 (зав. N225701)

TU-4



software assessment

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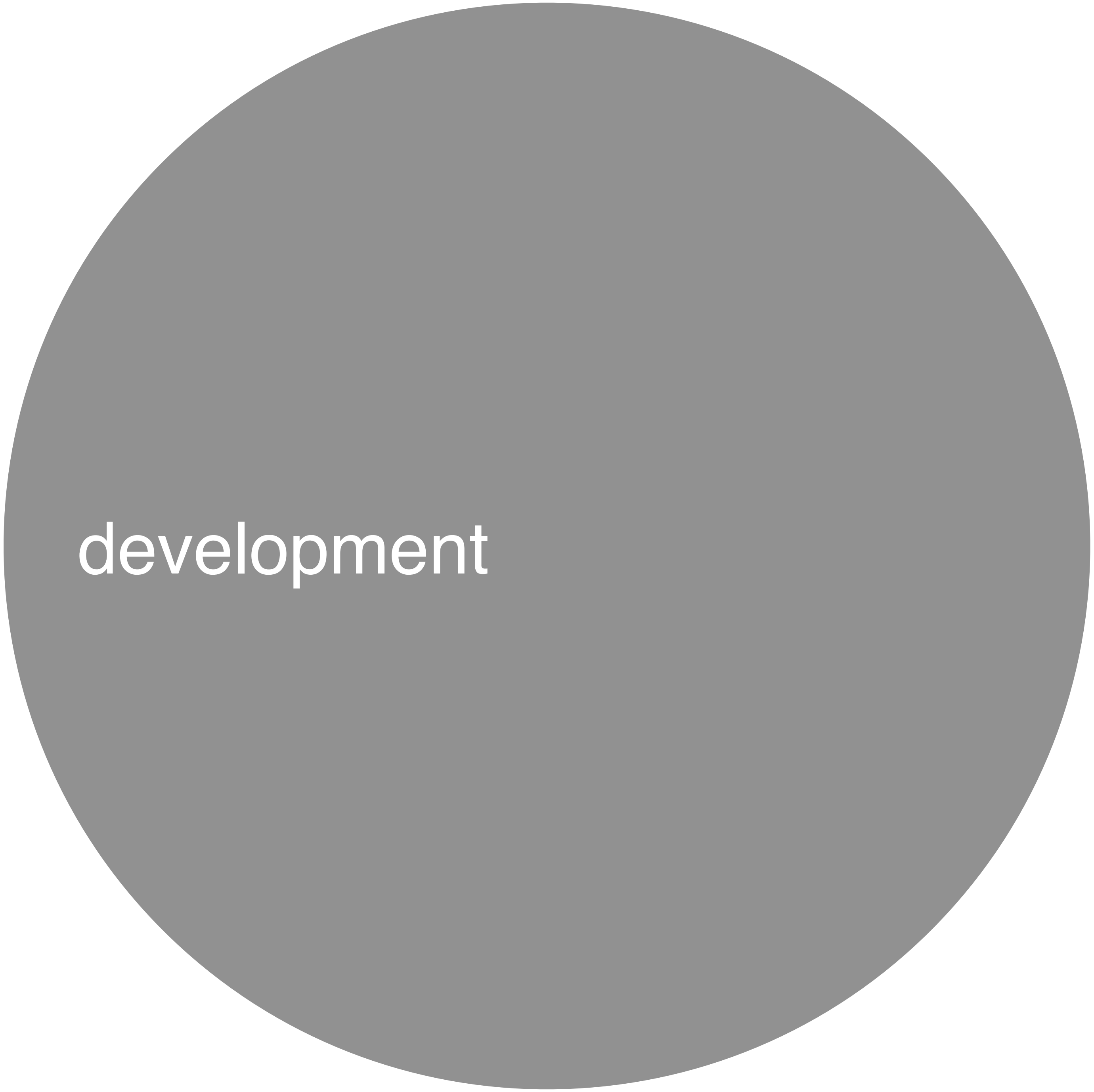
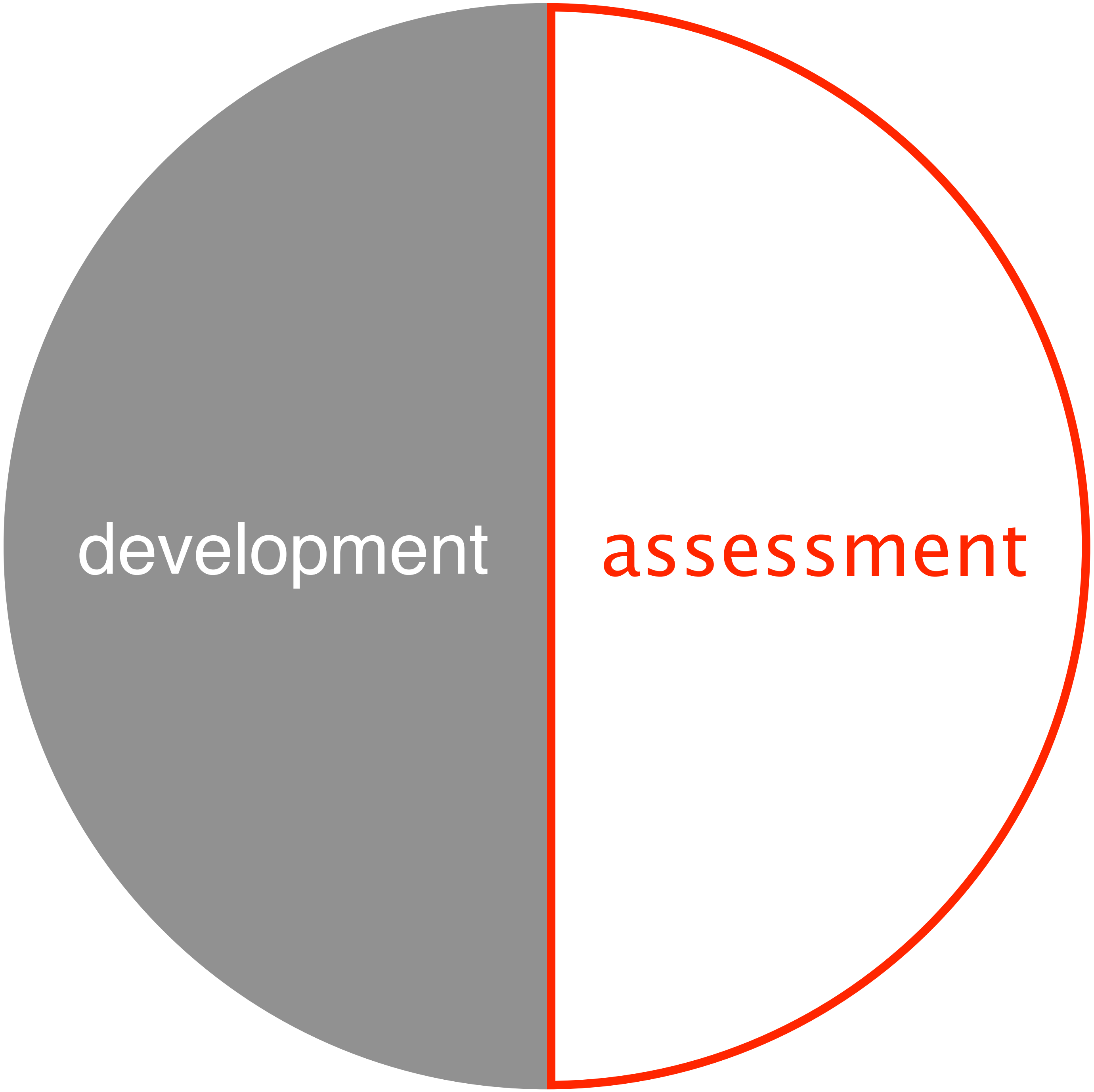
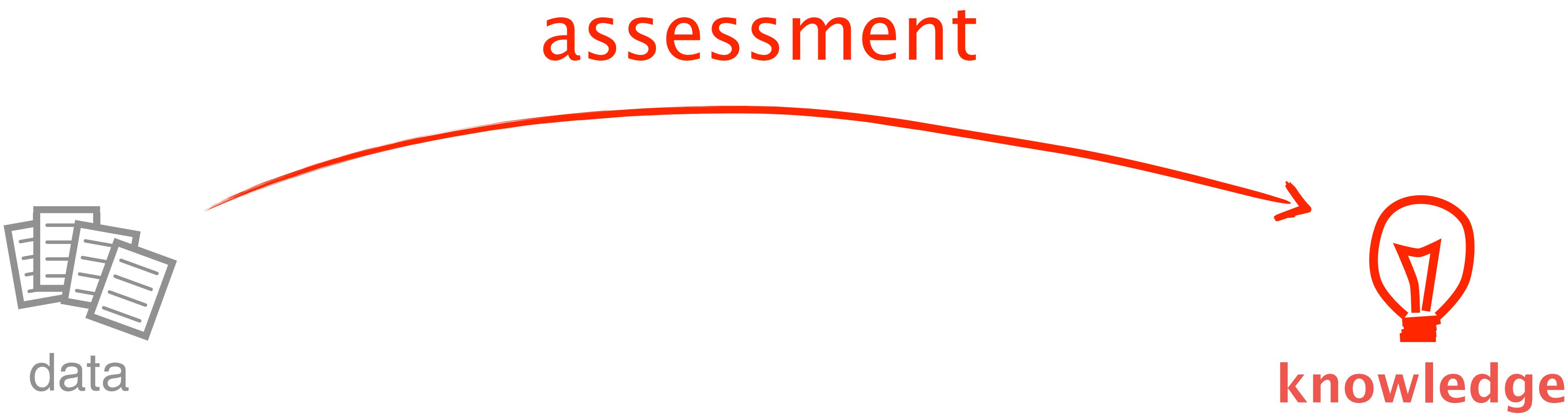


development



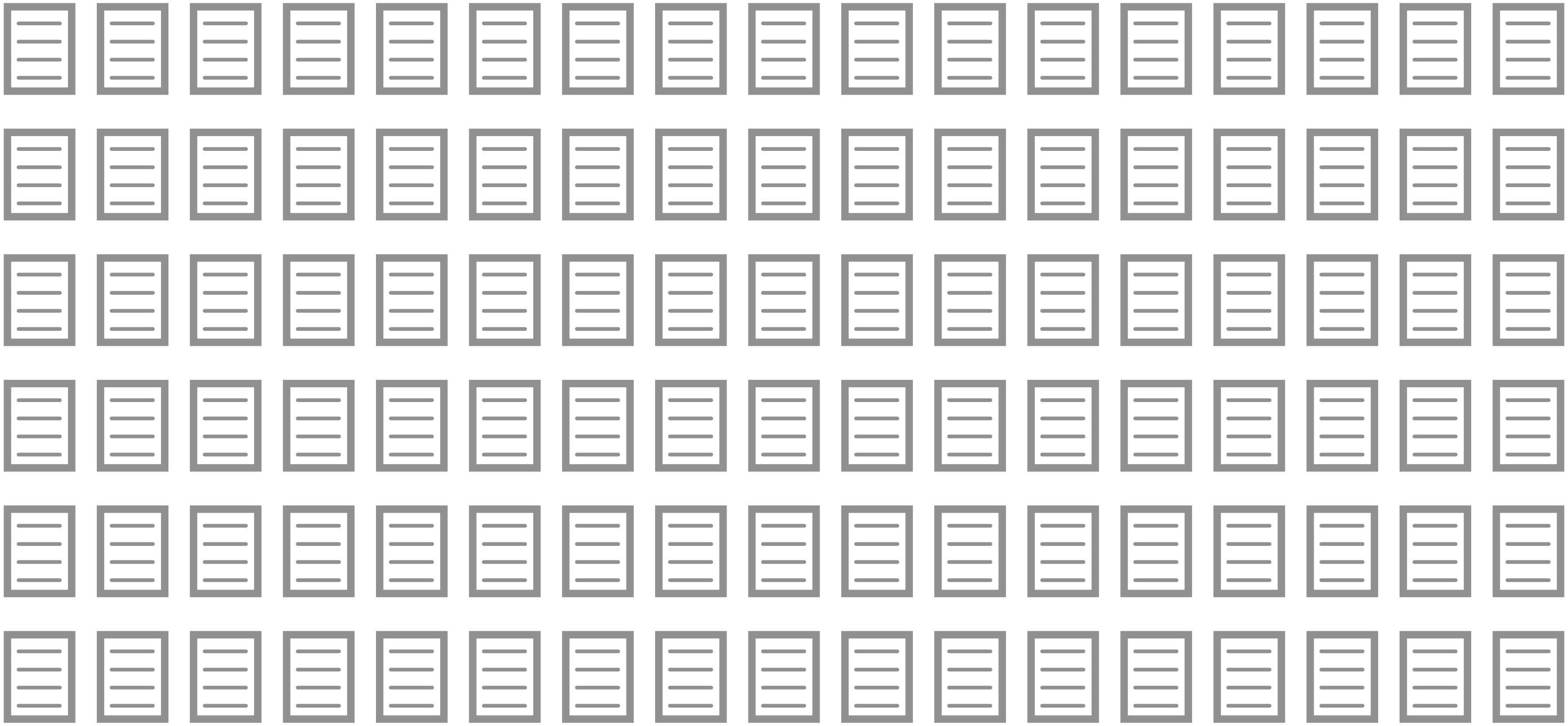
http://www.humane-assessment.com/minibook/assessment-costs



assessment

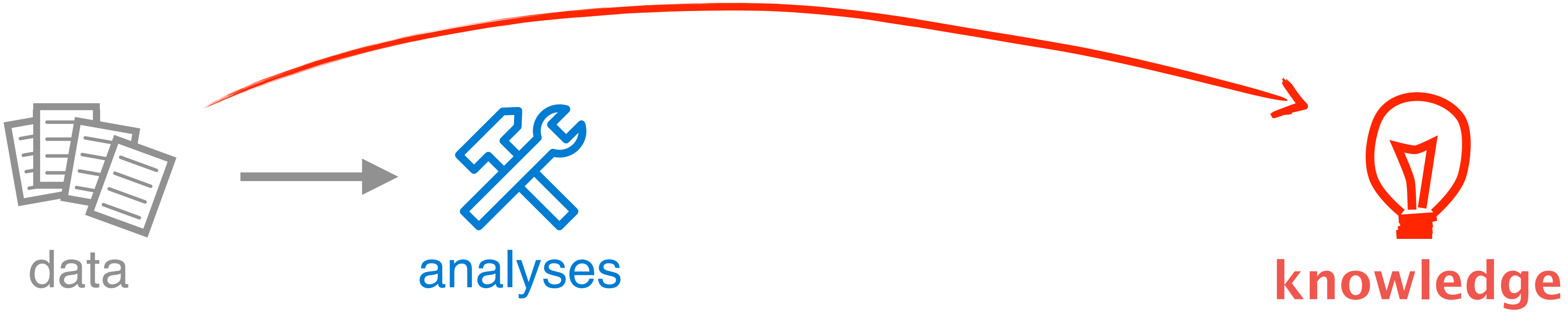
data

knowledge



data

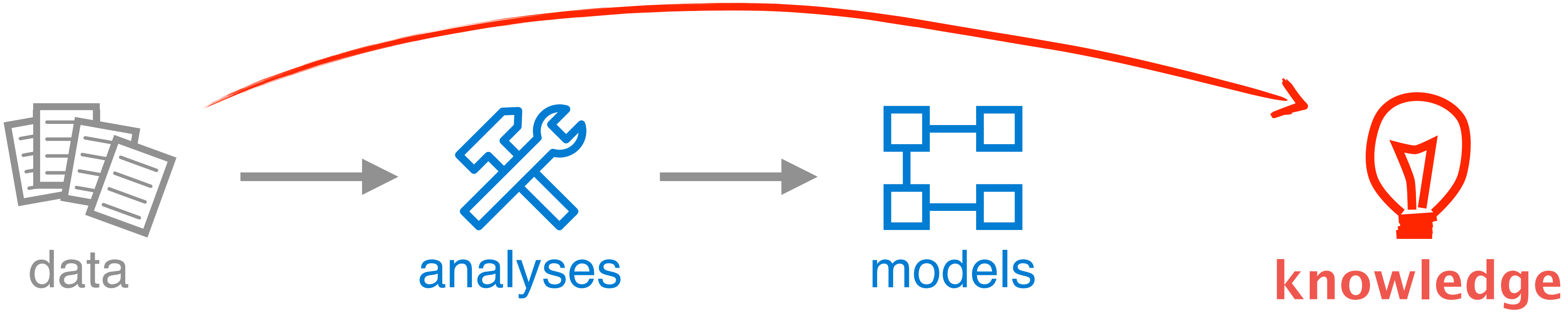
knowledge

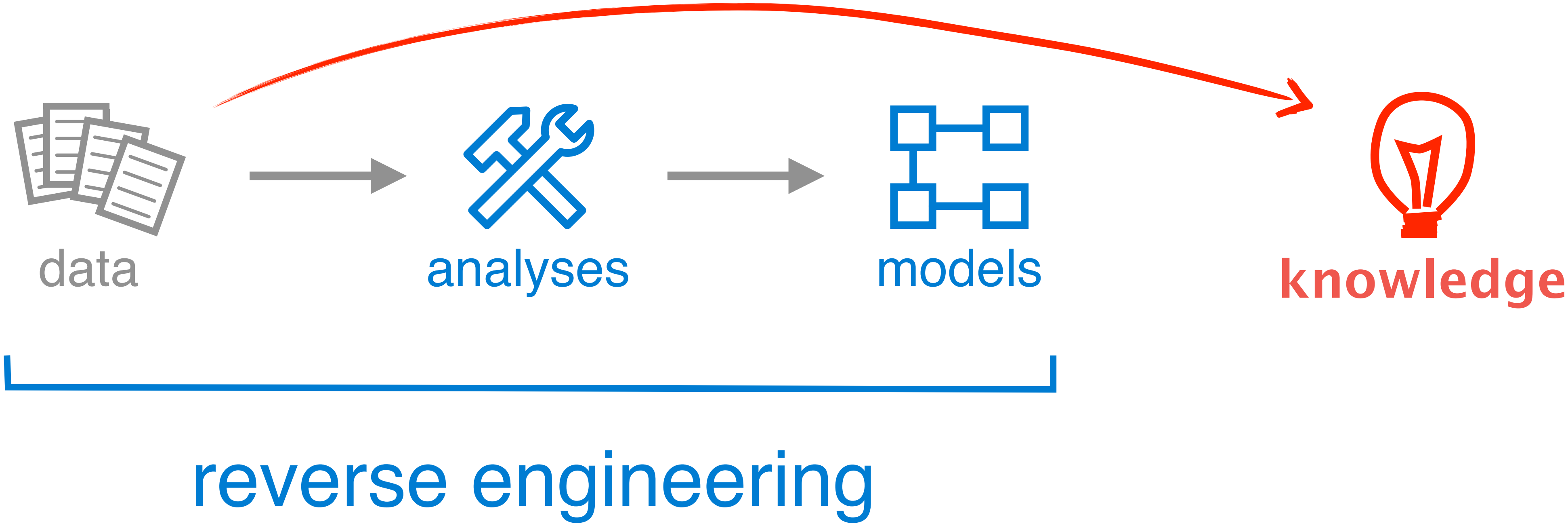


data

analyses

knowledge


data
analyses
models
knowledge



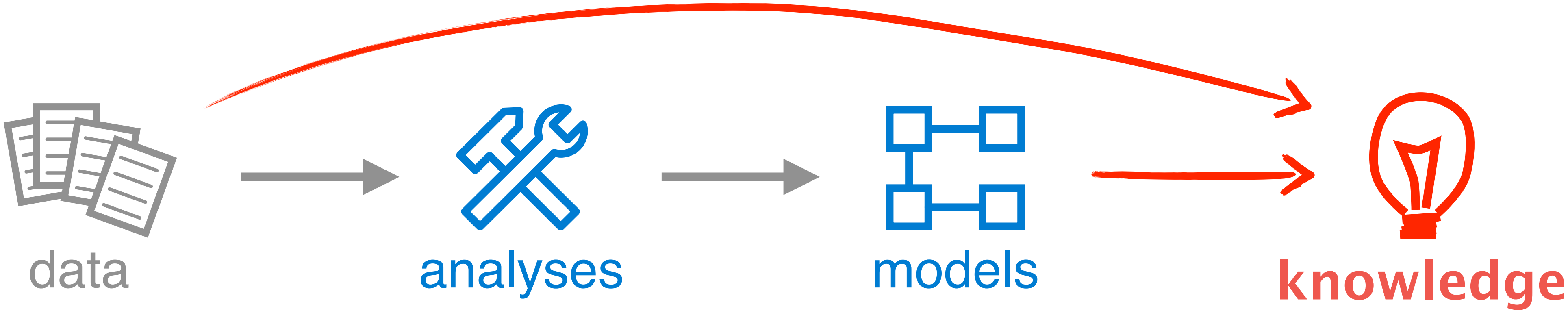
data

analyses

models

knowledge

reverse engineering

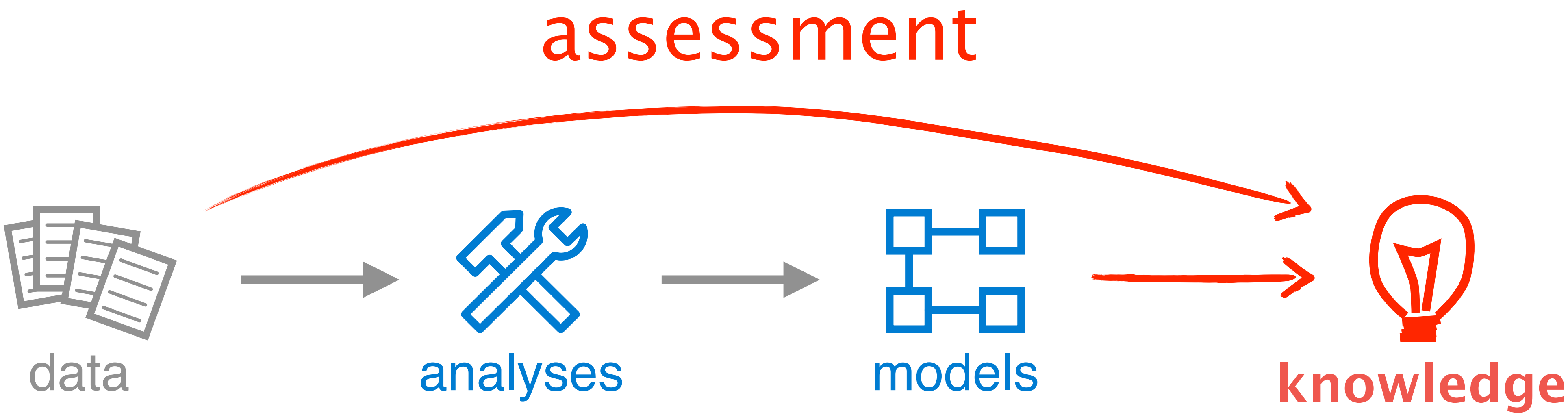


data

analyses

models

knowledge



assessment

data

analyses

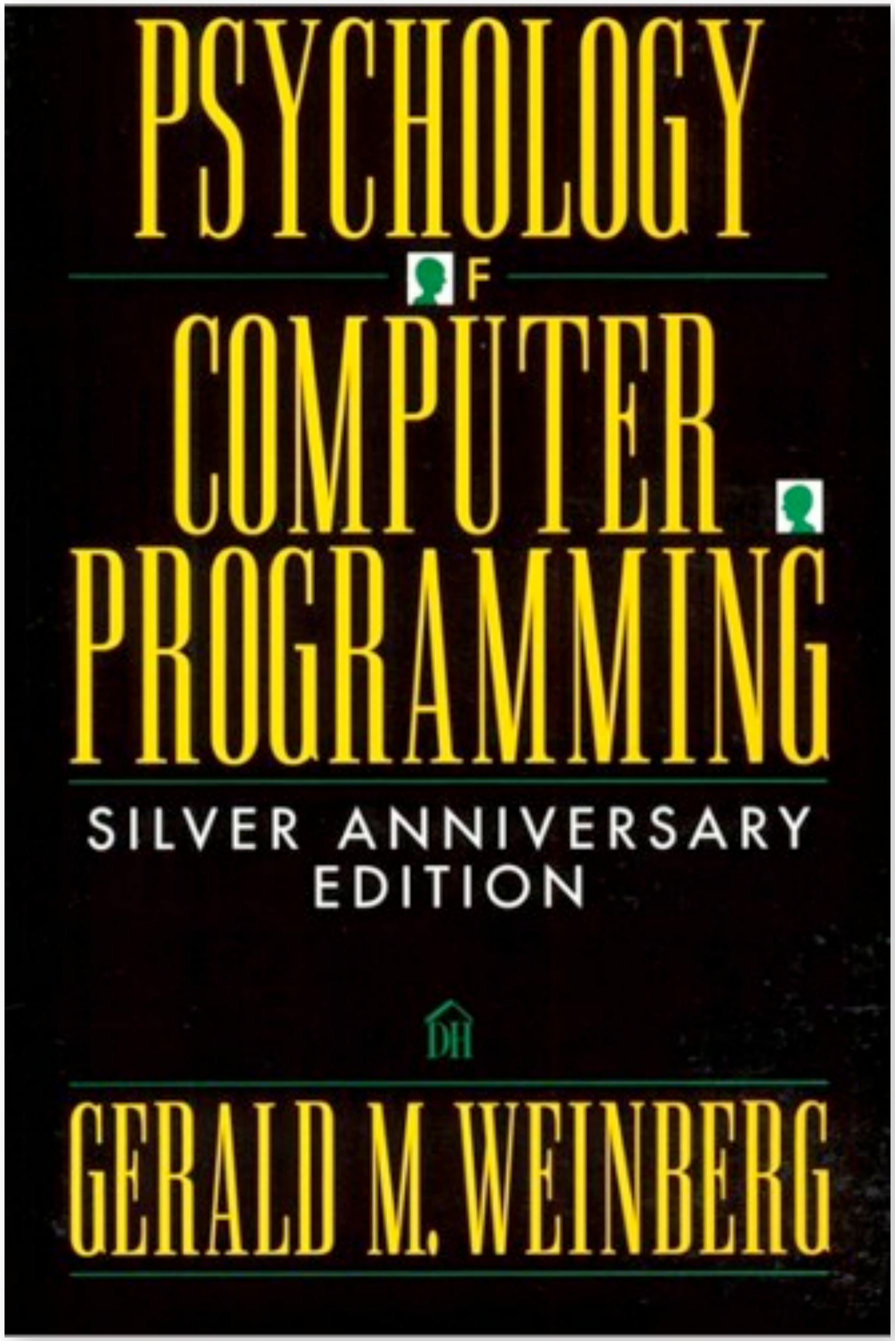
models

knowledge

interview during demo

Serge Demeyer, Stéphane Ducasse, Oscar Nierstrasz
Object-Oriented Reengineering
Patterns

chat with maintainers



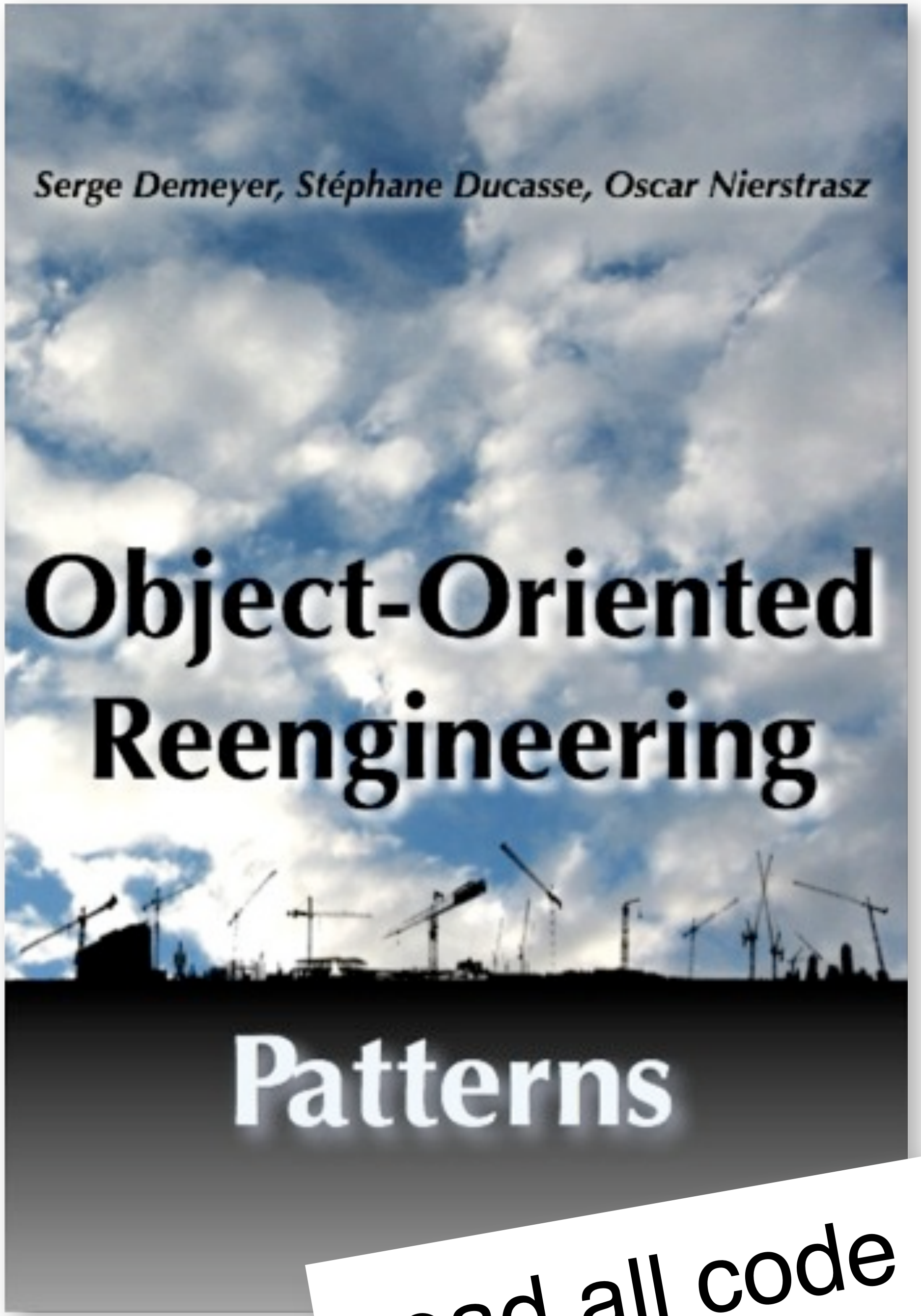
PSYCHOLOGY

OF

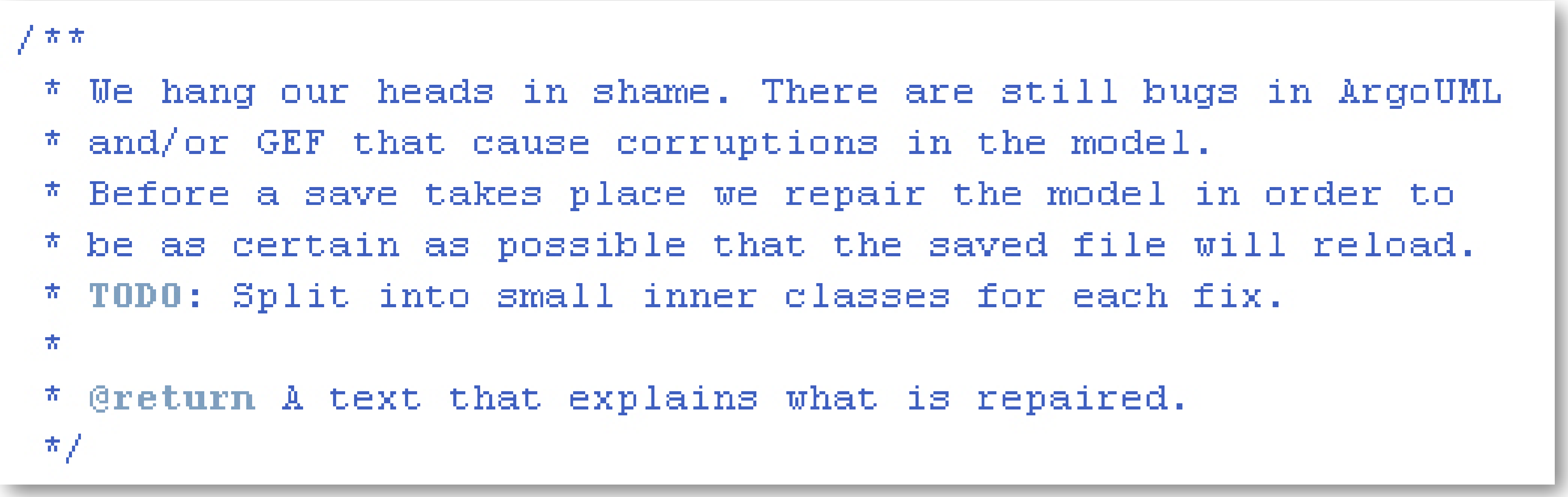
COMPUTER PROGRAMMING

SILVER ANNIVERSARY EDITION

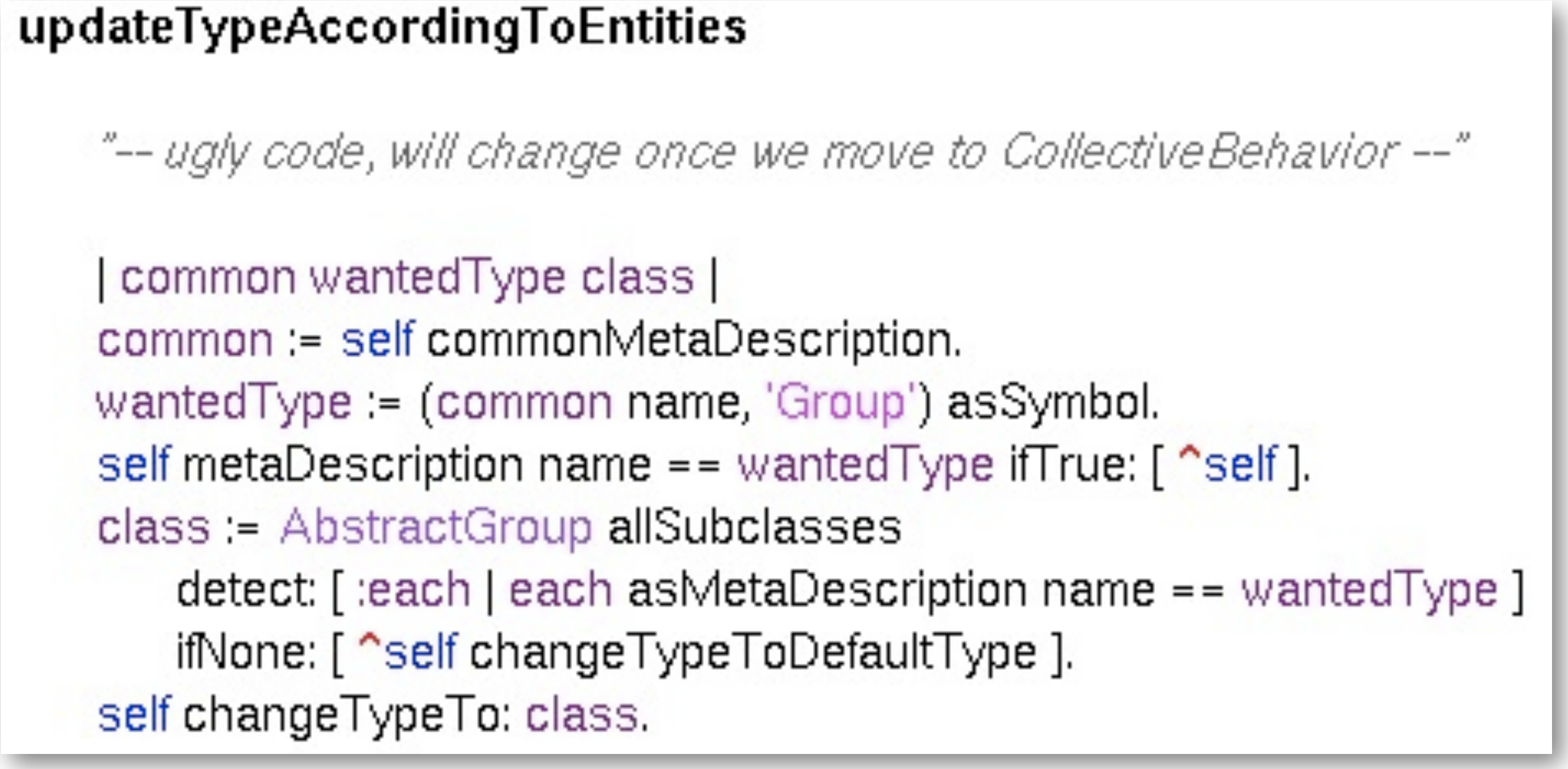
GERALD M. WEINBERG


Serge Demeyer, Stéphane Ducasse, Oscar Nierstrasz
Object-Oriented Reengineering Patterns

read all code in one hour



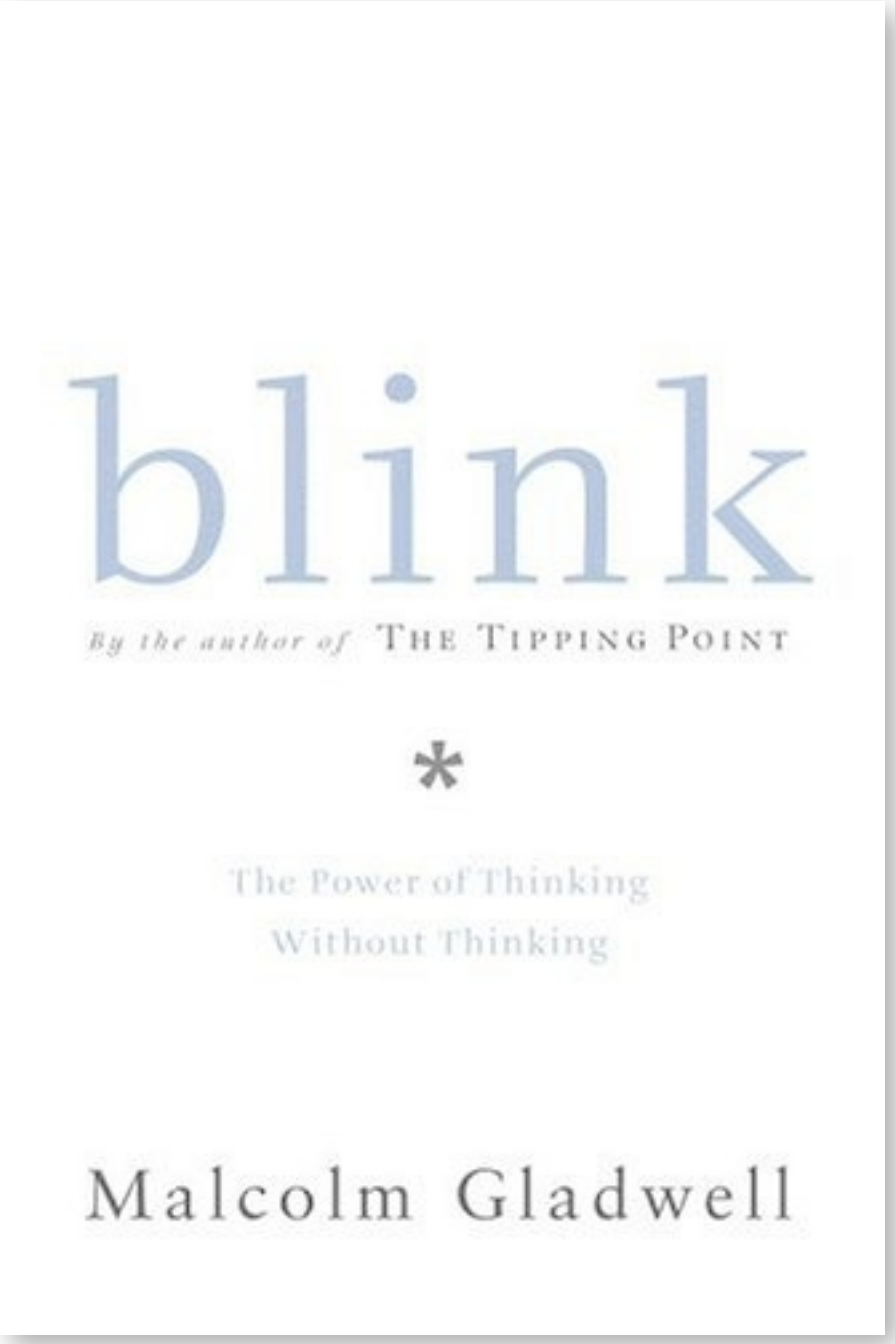
```
/**
 * We hang our heads in shame. There are still bugs in ArgoUML
 * and/or GEF that cause corruptions in the model.
 * Before a save takes place we repair the model in order to
 * be as certain as possible that the saved file will reload.
 * TODO: Split into small inner classes for each fix.
 *
 * @return A text that explains what is repaired.
 */
```



```
updateTypeAccordingToEntities

    "-- ugly code, will change once we move to CollectiveBehavior --"

    | common wantedType class |
    common := self commonMetaDescription.
    wantedType := (common name, 'Group') asSymbol.
    self metaDescription name == wantedType ifTrue: [ ^self ].
    class := AbstractGroup allSubclasses
        detect: [ :each | each asMetaDescription name == wantedType ]
        ifNone: [ ^self changeTypeToDefaultType ].
    self changeTypeTo: class.
```



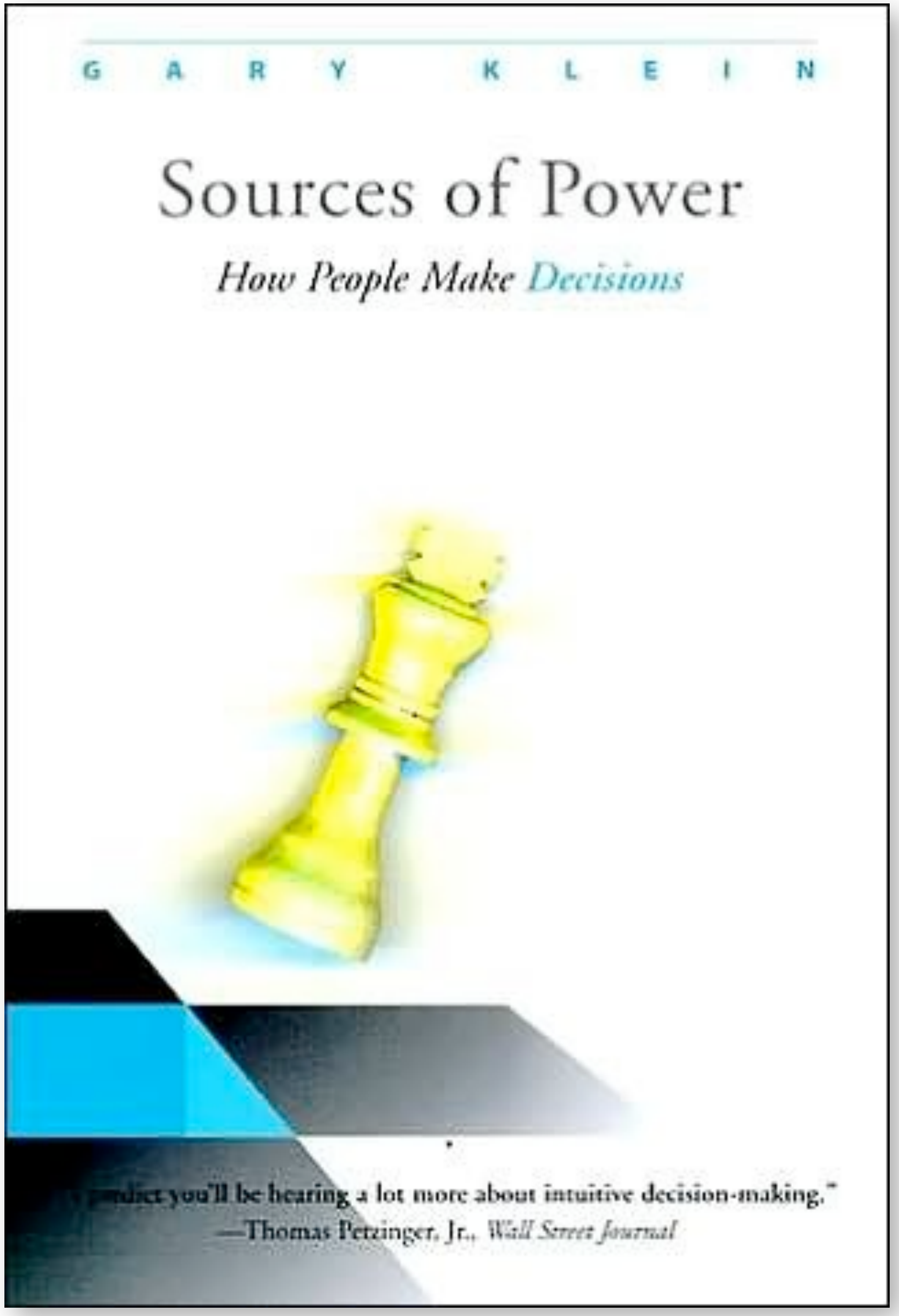
blink

By the author of THE TIPPING POINT

*

The Power of Thinking
Without Thinking

Malcolm Gladwell

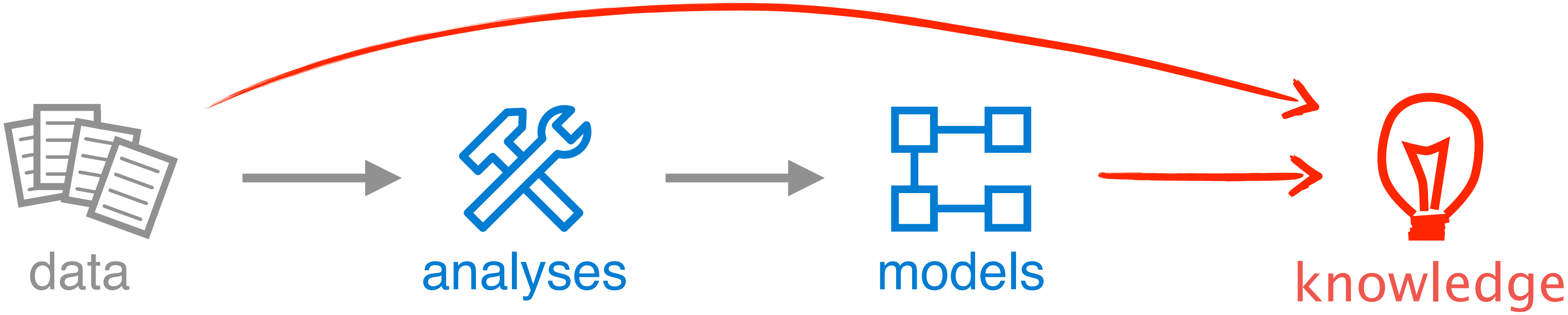


GARY KLEIN

Sources of Power

How People Make Decisions

"predict you'll be hearing a lot more about intuitive decision-making."
—Thomas Petzinger, Jr., *Wall Street Journal*



data

analyses

models

knowledge

```
public class Library {
  List books;
  public Library() {…}
  public void addBook(Book b) {…}
  public void removeBook(Book b) {…}
  private boolean hasBook(Book b) {…}
  protected List getBooks() {…}
  protected void setBooks(List books) {…}
  public boolean equals(…) {…}
}
```

NOM = ?

```
public class Library {
  List books;
  public Library() {…}
  public void addBook(Book b) {…}
  public void removeBook(Book b) {…}
  private boolean hasBook(Book b) {…}
  protected List getBooks() {…}
  protected void setBooks(List books) {…}
  public boolean equals(…) {…}
}
```

NOM = 7

```
public class Library {
  List books;
  public Library() {…}
  public void addBook(Book b) {…}
  public void removeBook(Book b) {…}
  private boolean hasBook(Book b) {…}
  protected List getBooks() {…}
  protected void setBooks(List books) {…}
  public boolean equals(…) {…}
}
```

NOM = ~~7~~ 6

```
public class Library {
  List books;
  public Library() {…}
  public void addBook(Book b) {…}
  public void removeBook(Book b) {…}
  private boolean hasBook(Book b) {…}
  protected List getBooks() {…}
  protected void setBooks(List books) {…}
  public boolean equals(…) {…}
}
```

NOM = ~~7~~ ~~6~~ 4

```
public class Library {
  List books;
  public Library() {…}
  public void addBook(Book b) {…}
  public void removeBook(Book b) {…}
  private boolean hasBook(Book b) {…}
  protected List getBooks() {…}
  protected void setBooks(List books) {…}
  public boolean equals(…) {…}
}
```

NOM = ~~7~~ ~~6~~ ~~4~~ 3

```
public class Library {
  List books;
  public Library() {…}
  public void addBook(Book b) {…}
  public void removeBook(Book b) {…}
  private boolean hasBook(Book b) {…}
  protected List getBooks() {…}
  protected void setBooks(List books) {…}
  public boolean equals(…) {…}
}
```

NOM = ~~7~~ ~~6~~ ~~4~~ ~~3~~ 2

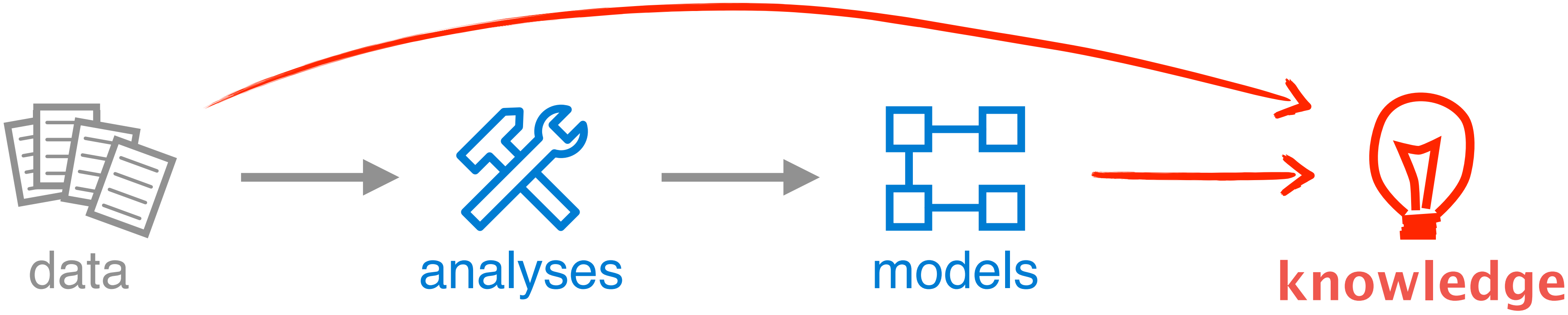
```
public class Library {
  List books;
  public Library() {…}
  public void addBook(Book b) {…}
  public void removeBook(Book b) {…}
  private boolean hasBook(Book b) {…}
  protected List getBooks() {…}
  protected void setBooks(List books) {…}
  public boolean equals(…) {…}
}
```

NOM = 7, 6, 4, 3, 2 ?

```
public class Library {
  List books;
  public Library() {…}
  public void addBook(Book b) {…}
  public void removeBook(Book b) {…}
  private boolean hasBook(Book b) {…}
  protected List getBooks() {…}
  protected void setBooks(List books) {…}
  public boolean equals(…) {…}
}
```

NOM = 7, 6, 4, 3, 2 ?

your responsibility

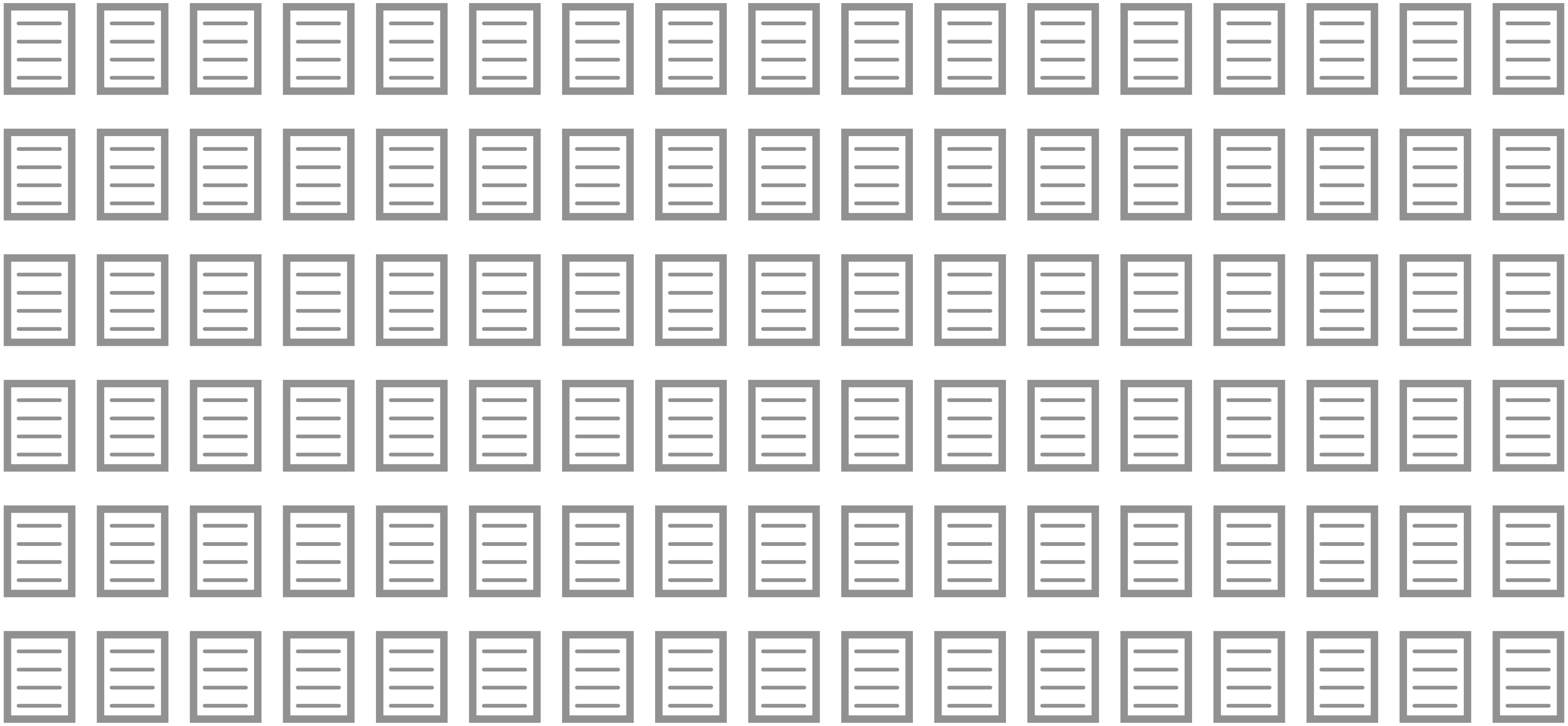


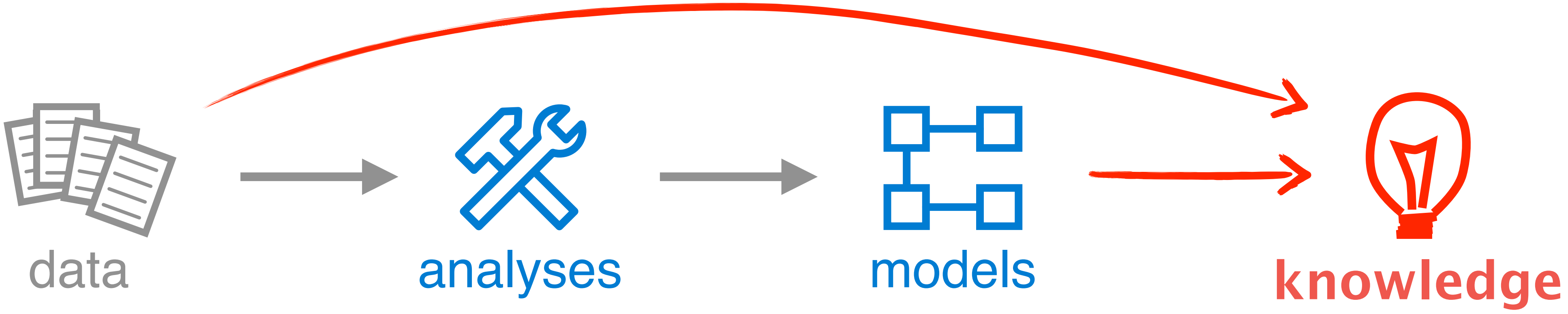
data

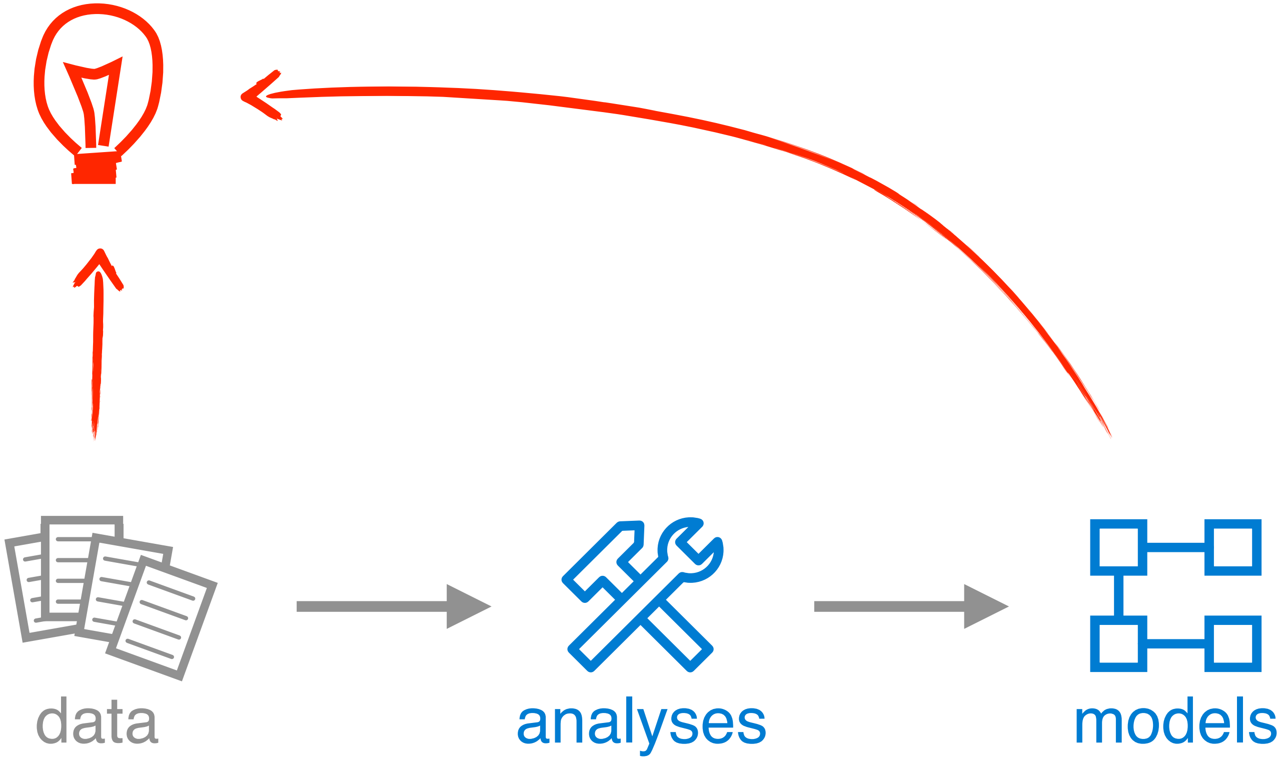
analyses

models

knowledge




data
analyses
models
knowledge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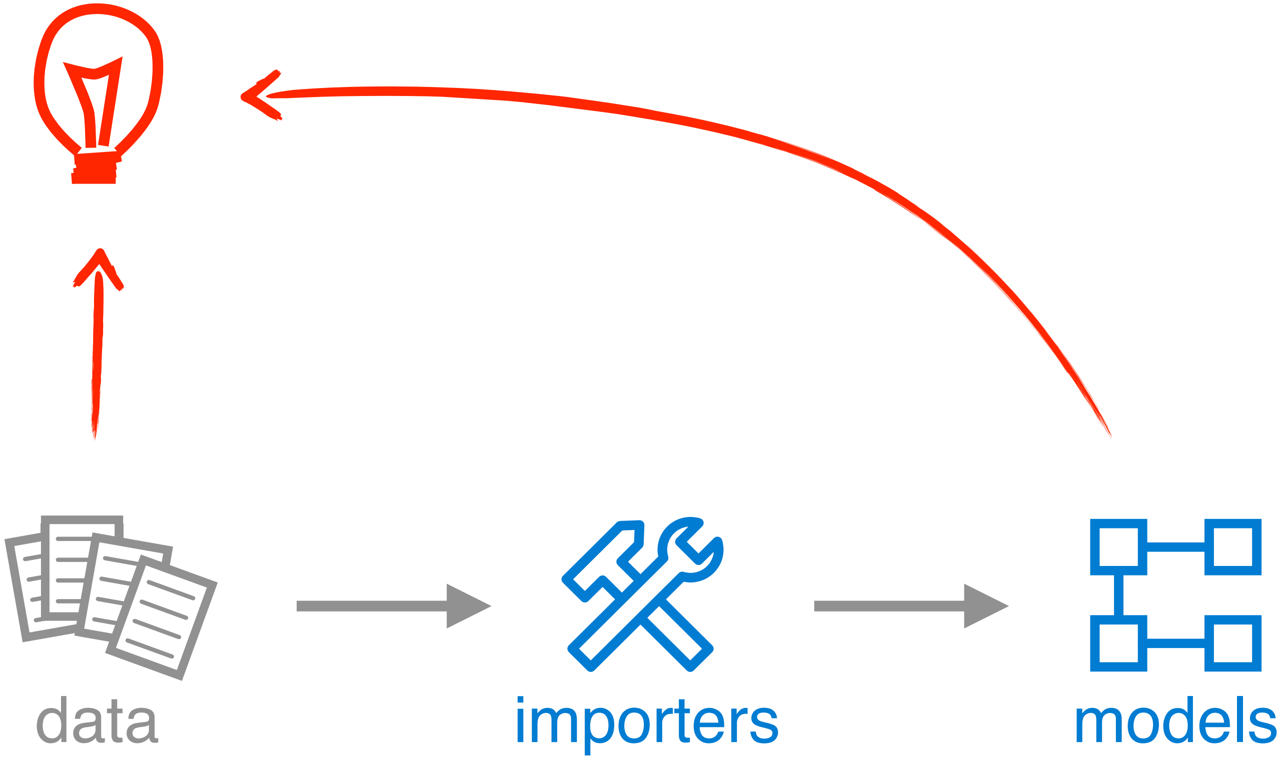
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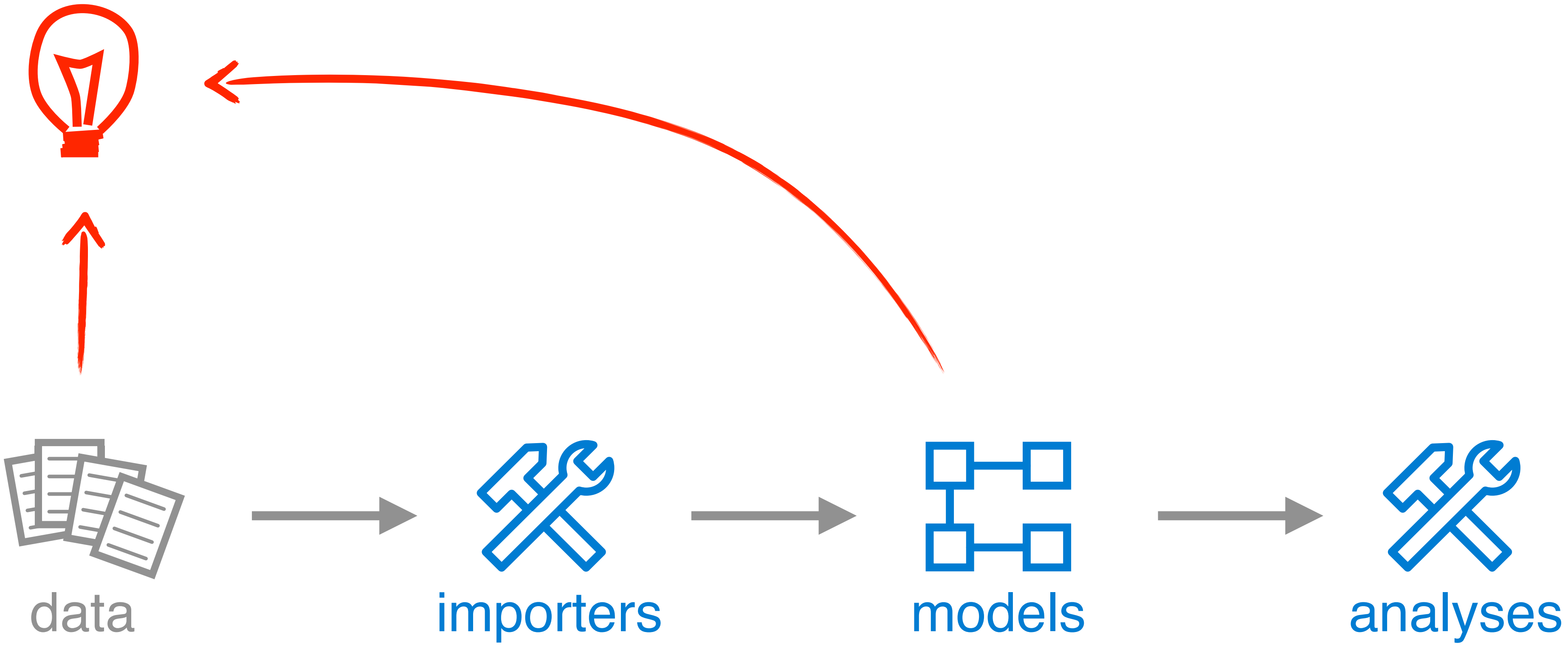
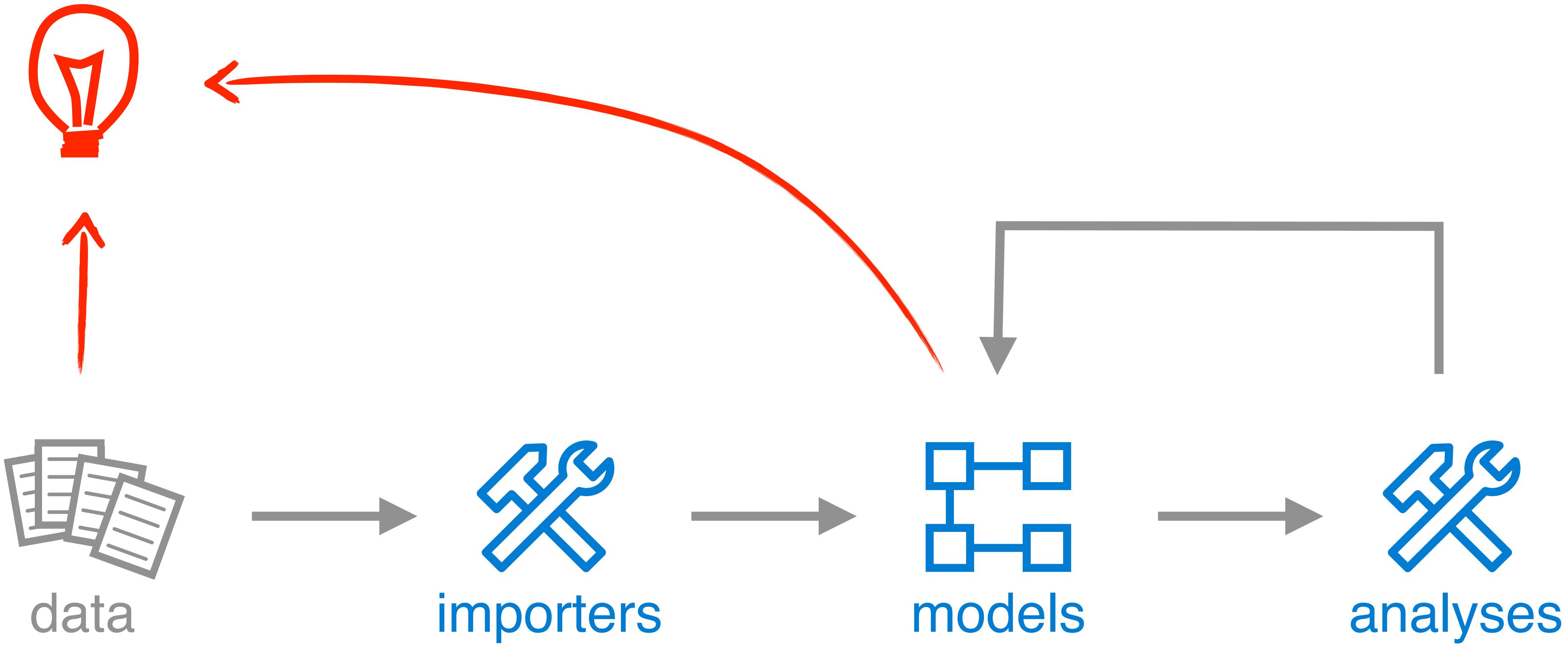
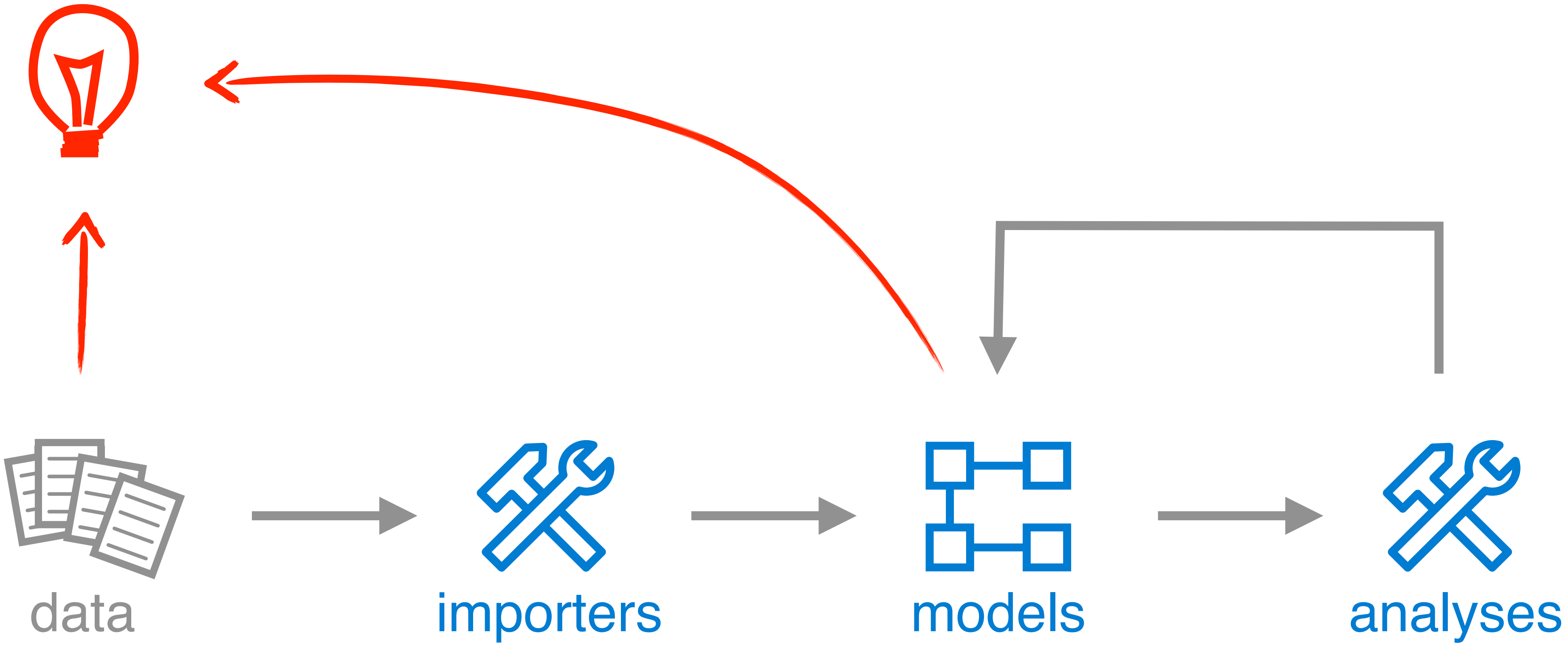
models



data → importers → models → analyses


data
importers
models
analyses

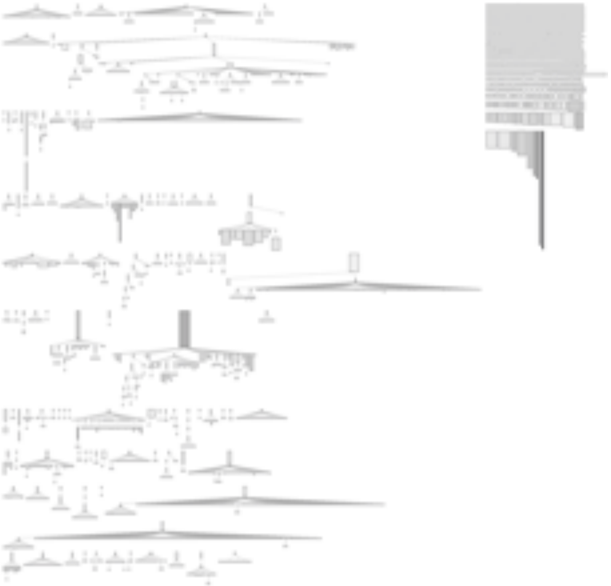


moosetechnology.org

classes select: #isAnnotated

McCabe = 21

LOC = 753,000



× – □
Moose Finder
Group (29) (FAMIXClassGroup)
org::argouml::..rojectBrowser (FAMIXClass)

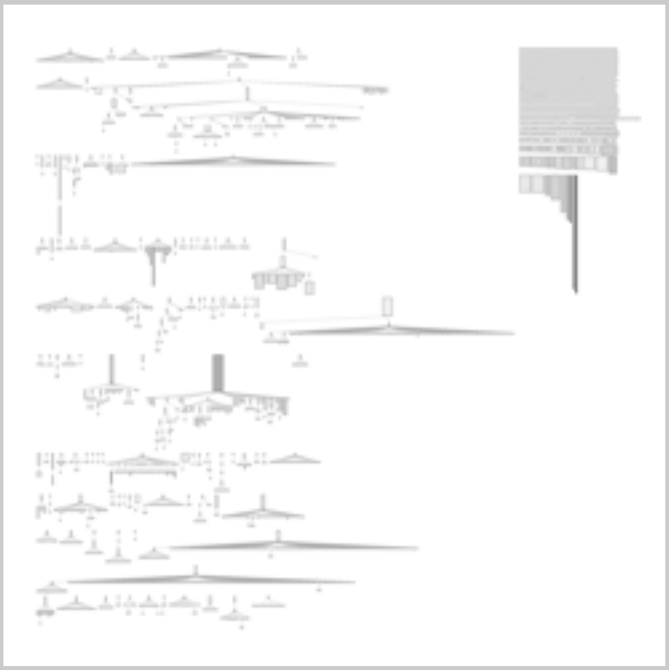
- org::argouml::language::cpp::reveng::CPPPa
- org::argouml::uml::diagram::ui::FigNodeMo
- org::argouml::model::euml::CoreFactoryEU
- org::argouml::model::euml::MetaTypesEUI
- org::argouml::model::euml::CoreHelperEU
- org::argouml::model::mdr::MDRModelImpl
- org::argouml::language::csharp::importer::
- org::argouml::model::mdr::CoreHelperMD
- org::argouml::kernel::ProjectImpl
- org::argouml::language::java::generator::G
- org::argouml::uml::reveng::idl::Modeler
- org::argouml::language::cpp::generator::G
- org::argouml::model::mdr::UndoCoreHelp
- org::argouml::ui::ProjectBrowser
- org::argouml::language::csharp::generato
- org::argouml::cognitive::Critic
- org::argouml::language::cpp::reveng::Mod
- org::argouml::model::mdr::FacadeMDRImp
- org::argouml::model::mdr::StateMachines
- org::argouml::model::mdr::CommonBehav
- org::argouml::uml::diagram::ui::FigEdgeMo
- org::argouml::cognitive::Designer
- org::argouml::model::mdr::CoreFactoryMD
- org::argouml::model::euml::FacadeEUMLIr
- org::argouml::language::cpp::reveng::CPPL

• • •

classes select: #isGod

McCabe = 21

LOC = 753,000



Moose Finder

Group (29) (FAMIXClassGroup)

- org::argouml::language::cpp::reveng::CPPP...
- org::argouml::uml::diagram::ui::FigNodeMo...
- org::argouml::model::euml::CoreFactoryEU...
- org::argouml::model::euml::MetaTypesEU...
- org::argouml::model::euml::CoreHelperEU...
- org::argouml::model::mdr::MDRModelImpl...
- org::argouml::language::csharp::importer::...
- org::argouml::model::mdr::CoreHelperMD...
- org::argouml::kernel::ProjectImpl
- org::argouml::language::java::generator::G...
- org::argouml::uml::reveng::idl::Modeler
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- org::argouml::model::mdr::UndoCoreHelp...
- org::argouml::ui::ProjectBrowser
- org::argouml::language::csharp::generato...
- org::argouml::cognitive::Critic
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- org::argouml::model::mdr::FacadeMDRImp...
- org::argouml::model::mdr::StateMachinesH...
- org::argouml::model::mdr::CommonBehav...
- org::argouml::uml::diagram::ui::FigEdgeMo...
- org::argouml::cognitive::Designer
- org::argouml::model::mdr::CoreFactoryMD...
- org::argouml::model::euml::FacadeEUMLIm...
- org::argouml::language::cpp::reveng::CPPL...

org::argouml...rojectBrowser (FAMIXClass)

classes select: #isGod

McCabe = 21

LOC = 753,000

Moose Finder
Group (29) (FAMIXClassGroup)
org::argouml...rojectBrowser (FAMIXClass)

org::argouml::language::cpp::reveng::CPPP...
org::argouml::uml::diagram::ui::FigNodeMo...
org::argouml::model::euml::CoreFactoryEU...
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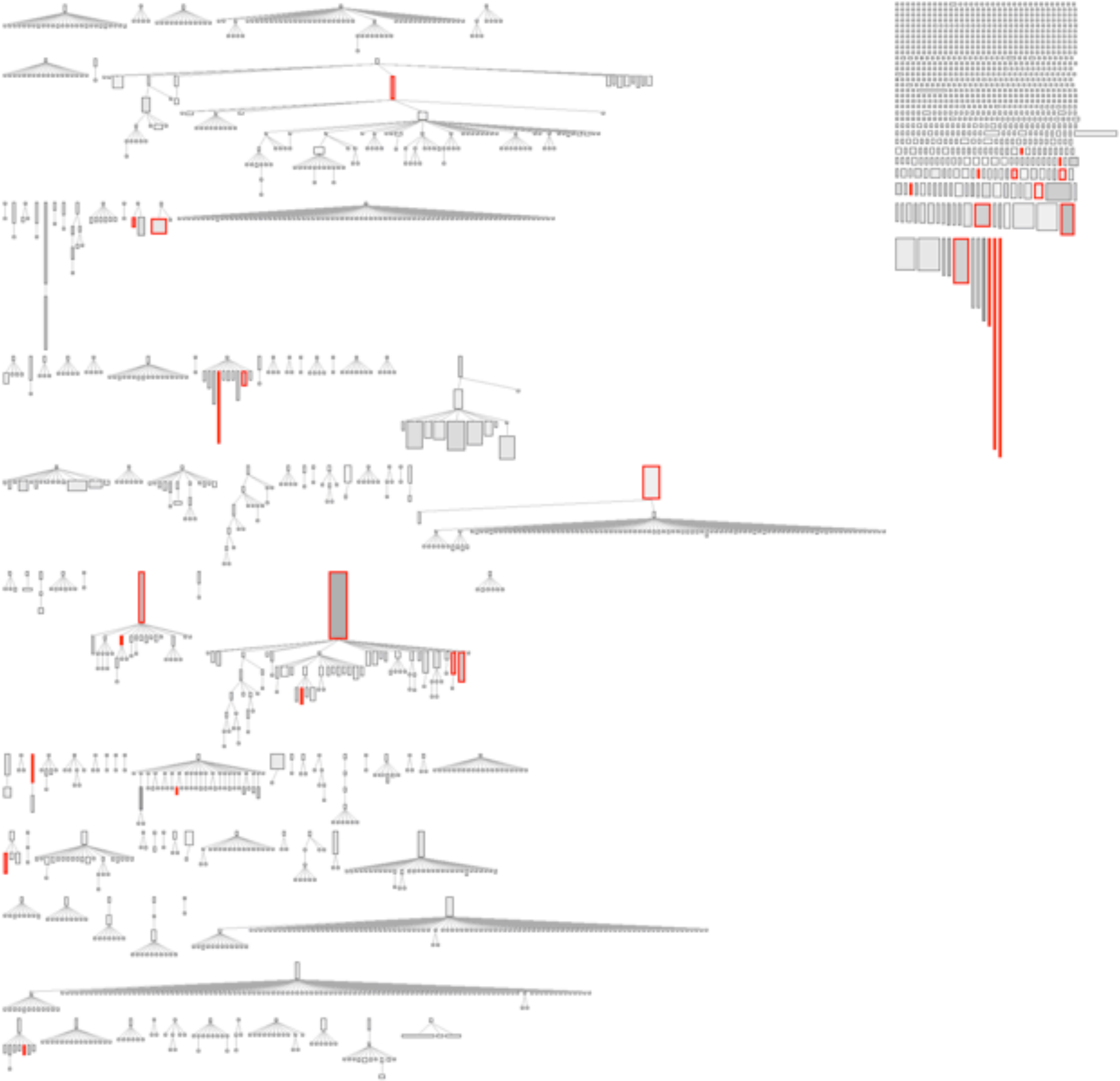
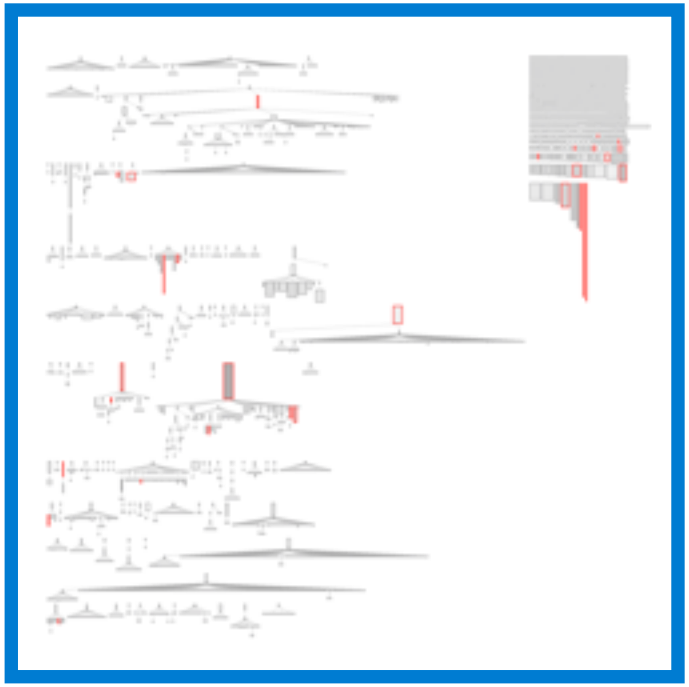


classes select: #isGod

McCabe = 21

LOC = 753,000



Moose Finder
Group (29) (FAMIXClassGroup)
org.argouml...rojectBrowser (FAMIXClass)

- org.argouml.language.cpp.reveng.CPPP
- org.argouml.uml.diagram.ui.FigNodeMo
- org.argouml.model.euml.CoreFactoryEU
- org.argouml.model.euml.MetaTypesEU
- org.argouml.model.euml.CoreHelperEU
- org.argouml.model.mdr.MDRModelImpl
- org.argouml.language.csharp.importer.
- org.argouml.model.mdr.CoreHelperMD
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- org.argouml.uml.reveng.idl.Modeler
- org.argouml.language.cpp.generator.G
- org.argouml.model.mdr.UndoCoreHelp
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- org.argouml.cognitive.Critic
- org.argouml.language.cpp.reveng.Mod
- org.argouml.model.mdr.FacadeMDRImp
- org.argouml.model.mdr.StateMachinesI
- org.argouml.model.mdr.CommonBehav
- org.argouml.uml.diagram.ui.FigEdgeMo
- org.argouml.cognitive.Designer
- org.argouml.model.mdr.CoreFactoryMD
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- org.argouml.language.cpp.reveng.CPPL

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classes select: #isGod

McCabe = 21

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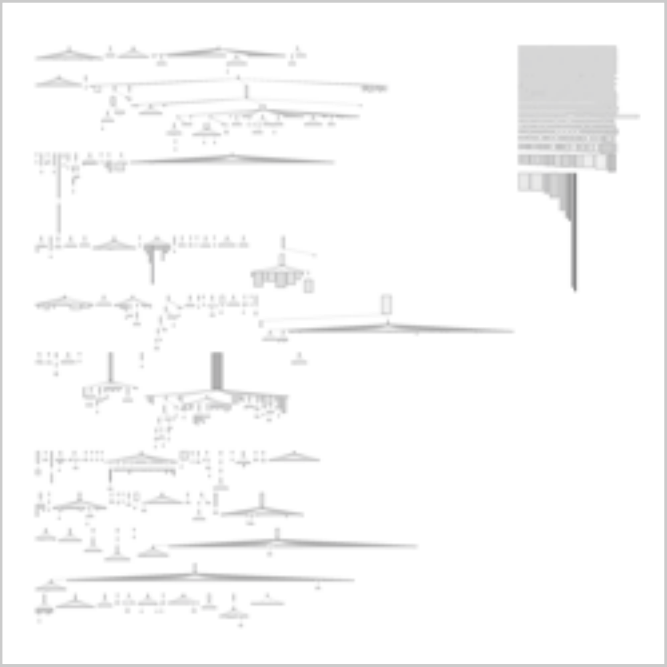

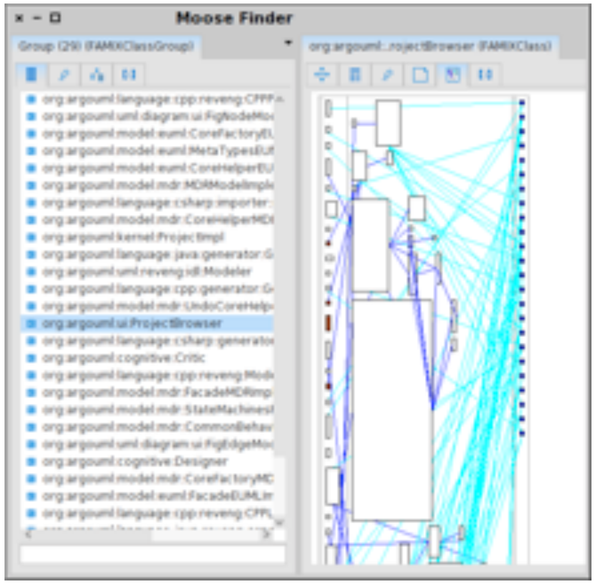

Moose Finder

Group (29) (FAMIXClassGroup)

org::argouml...rojectBrowser (FAMIXClass)

- org::argouml::language::cpp::reveng::CPPP
- org::argouml::uml::diagram::ui::FigNodeMo
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- org::argouml::cognitive::Designer
- org::argouml::model::mdr::CoreFactoryMD
- org::argouml::model::euml::FacadeEUMLIm
- org::argouml::language::cpp::reveng::CPPL

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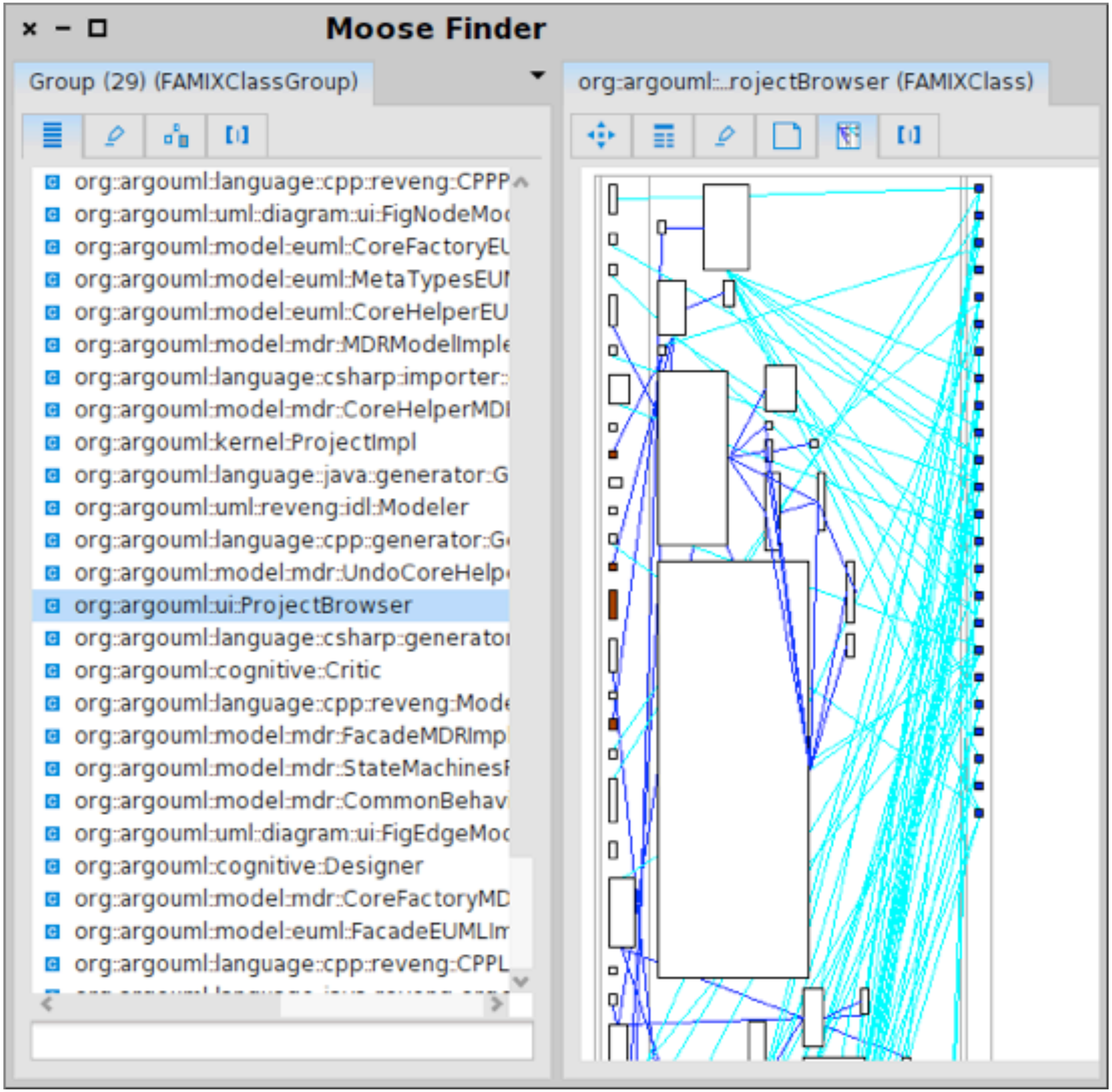
Moose Finder
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org:argouml:uml:diagram:ui:FigNodeMo
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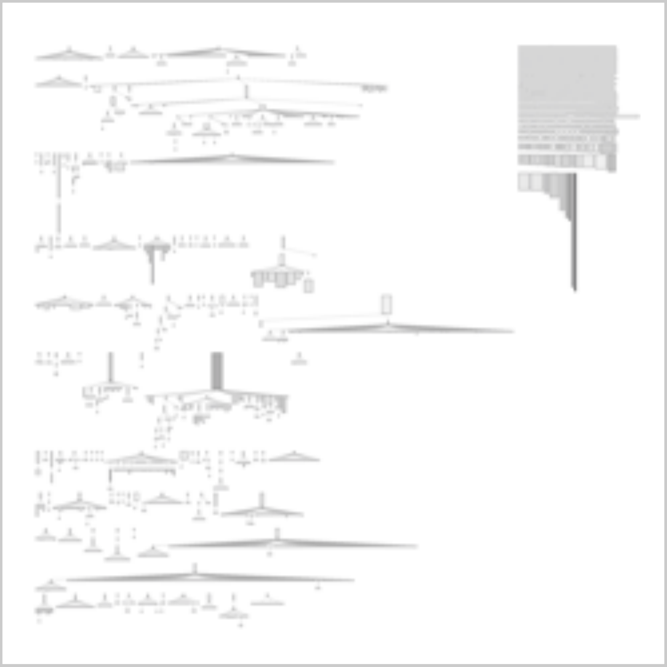
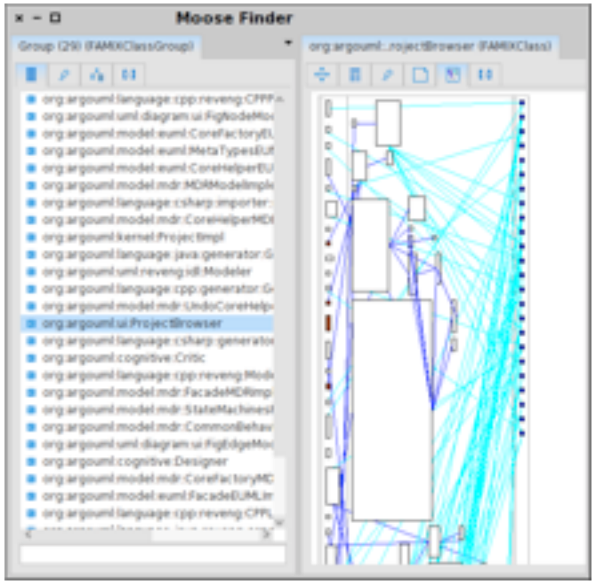
classes select: #isGod

McCabe = 21

LOC = 753,000




Moose Finder
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org.argouml...rojectBrowser (FAMIXClass)

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- org.argouml.model.euml.MetaTypesEUI
- org.argouml.model.euml.CoreHelperEU
- org.argouml.model.mdr.MDRModelImpl
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- org.argouml.model.mdr.CoreHelperMD
- org.argouml.kernel.ProjectImpl
- org.argouml.language.java.generator.G
- org.argouml.uml.reveng.idl.Modeler
- org.argouml.language.cpp.generator.G
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- org.argouml.cognitive.Critic
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- org.argouml.model.mdr.CoreFactoryMD
- org.argouml.model.euml.FacadeEUMLIm
- org.argouml.language.cpp.reveng.CPPL

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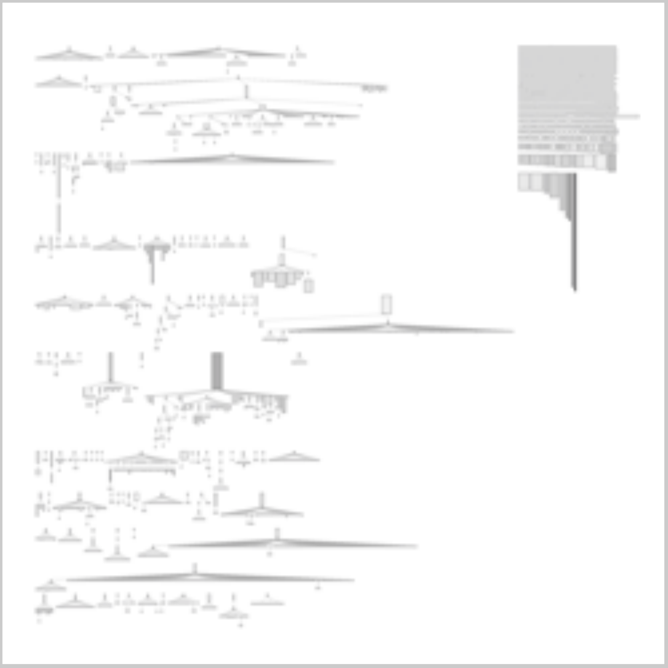

Moose Finder
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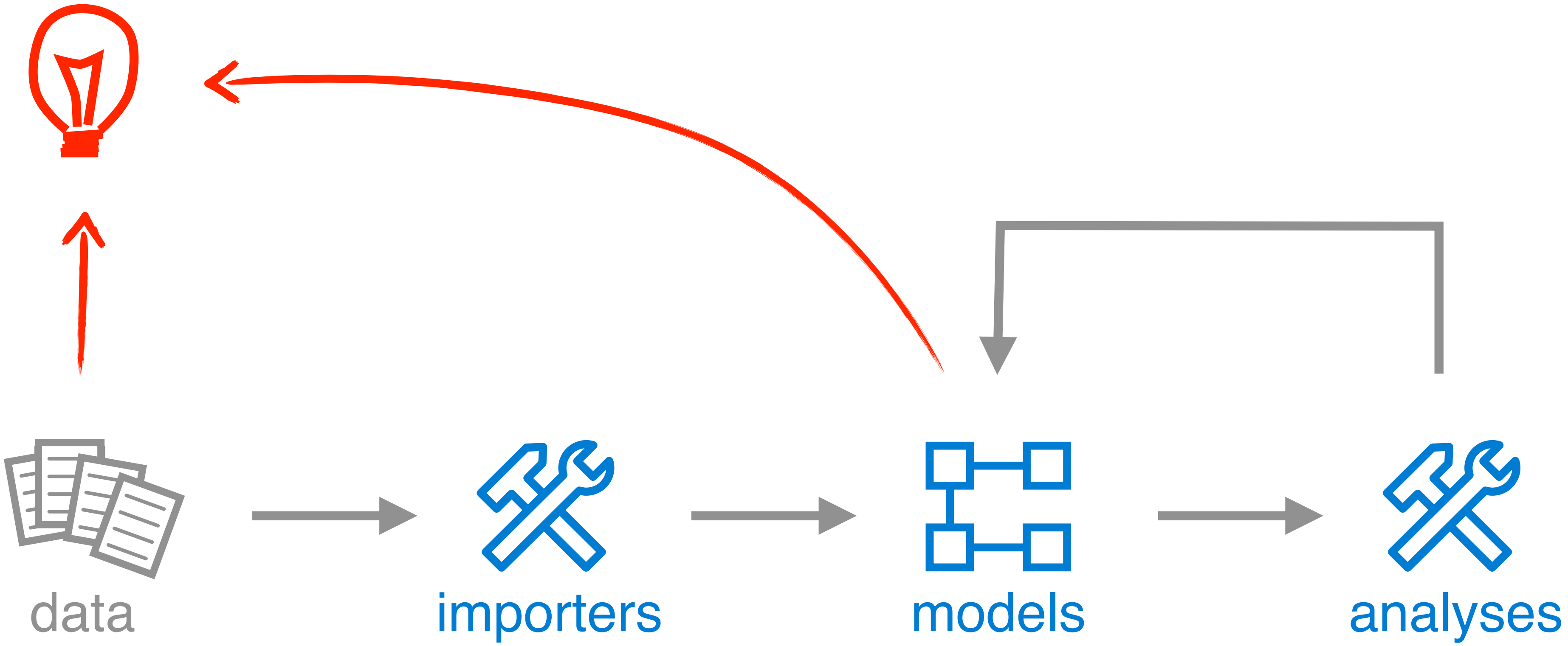
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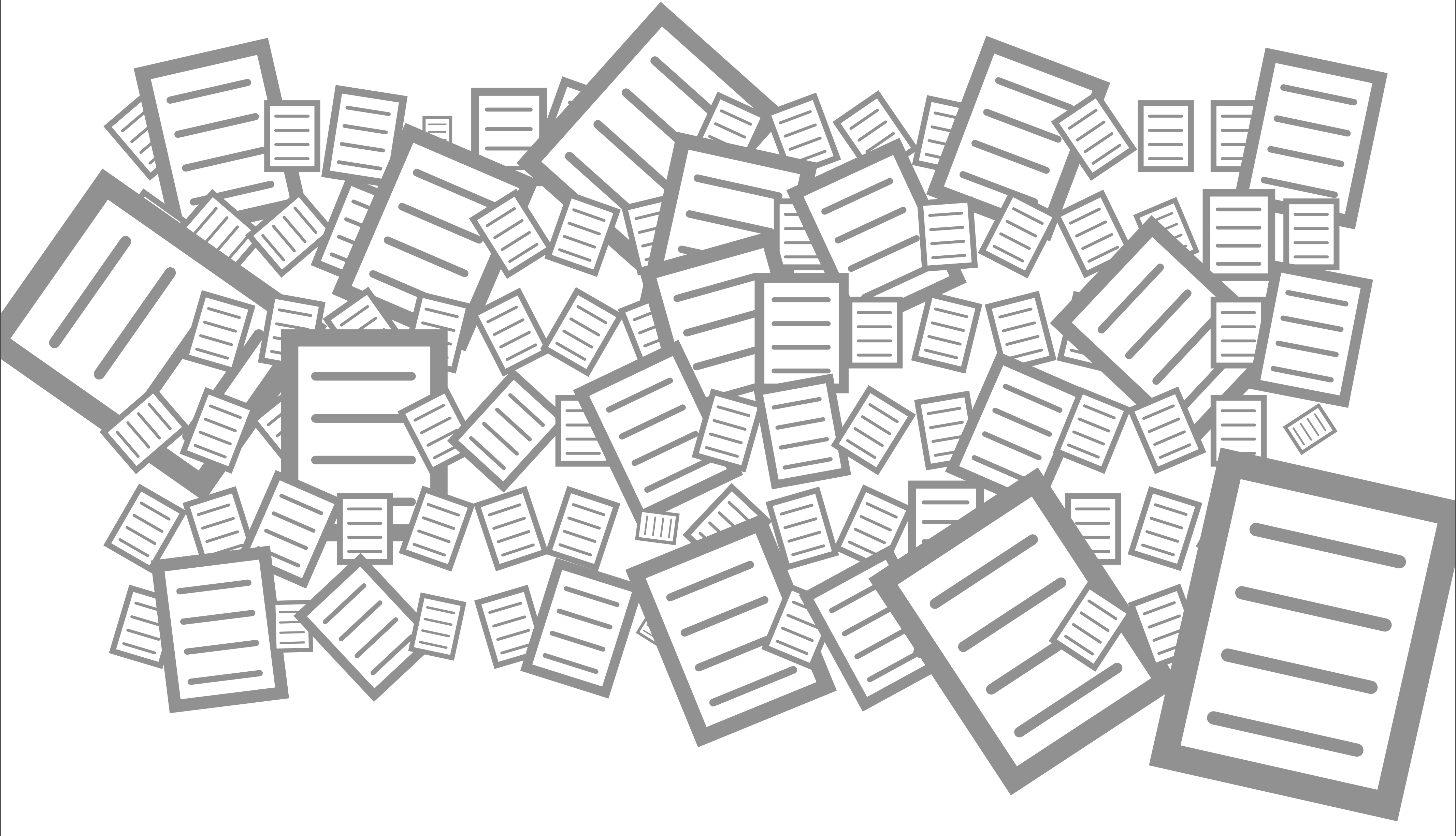
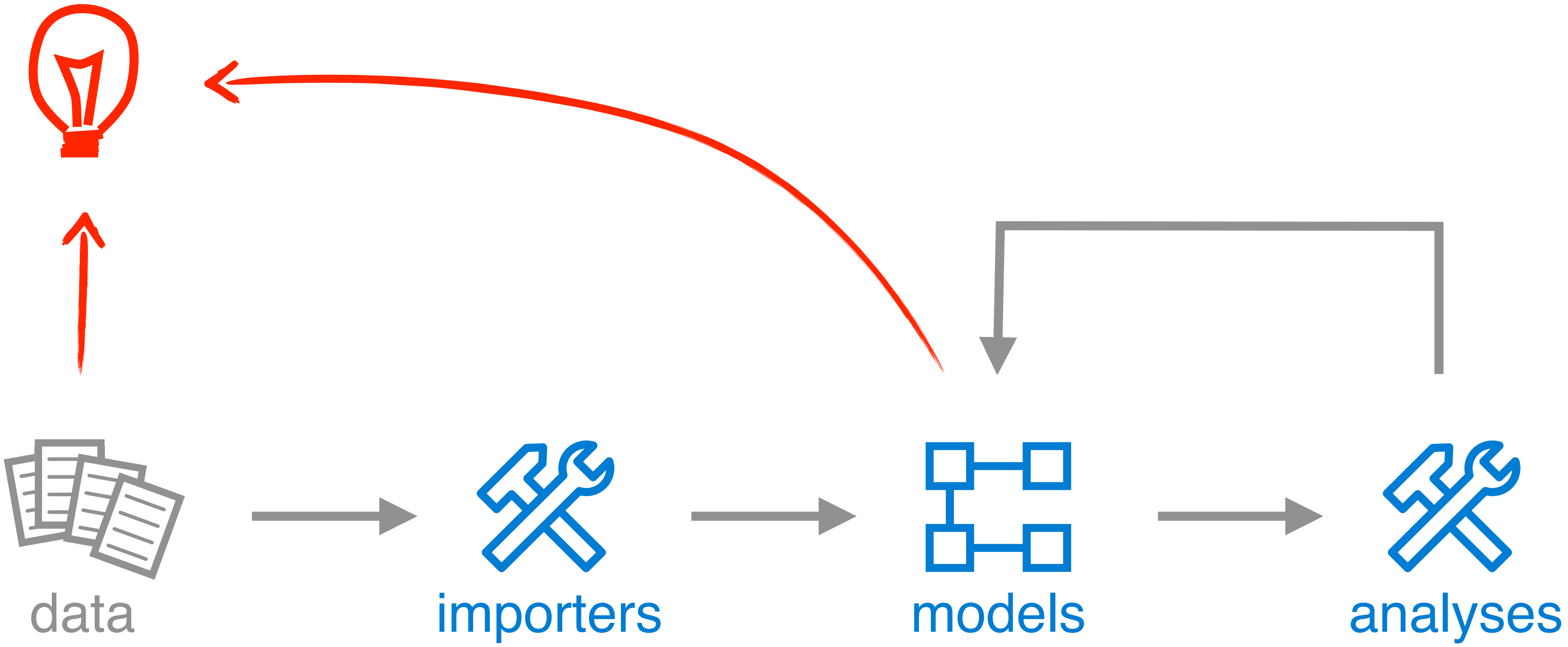
models
analyses

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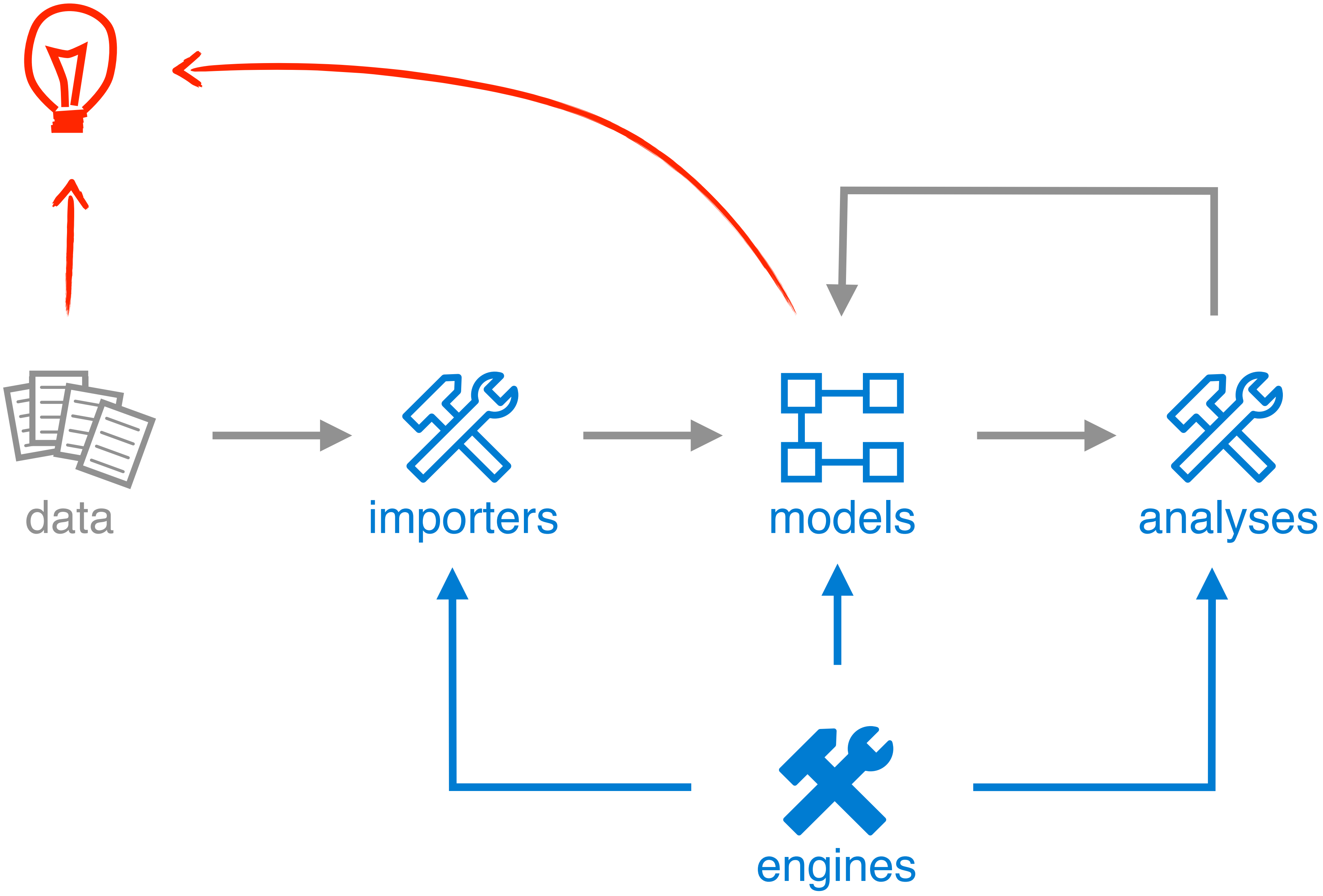
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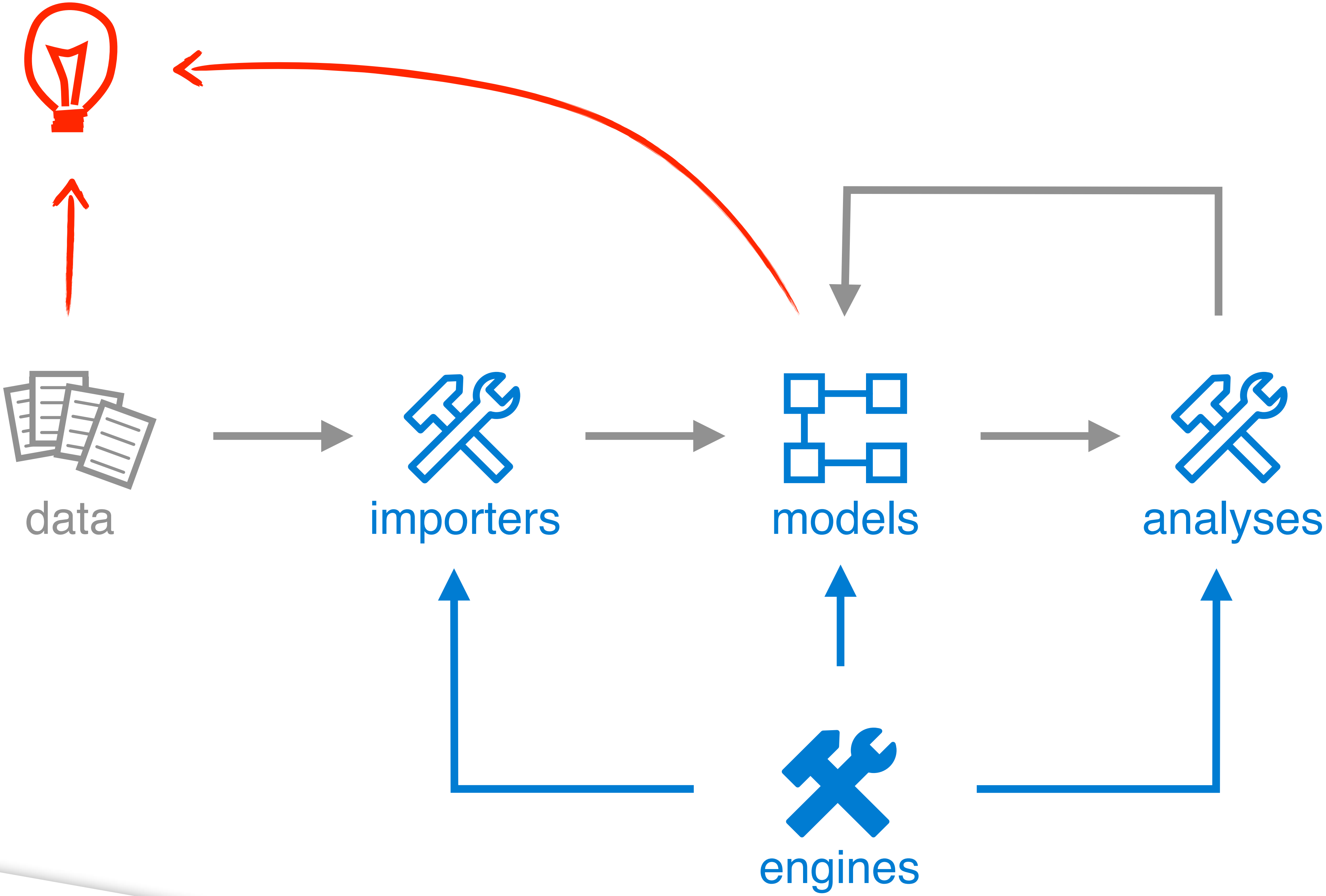
models
analyses
engines



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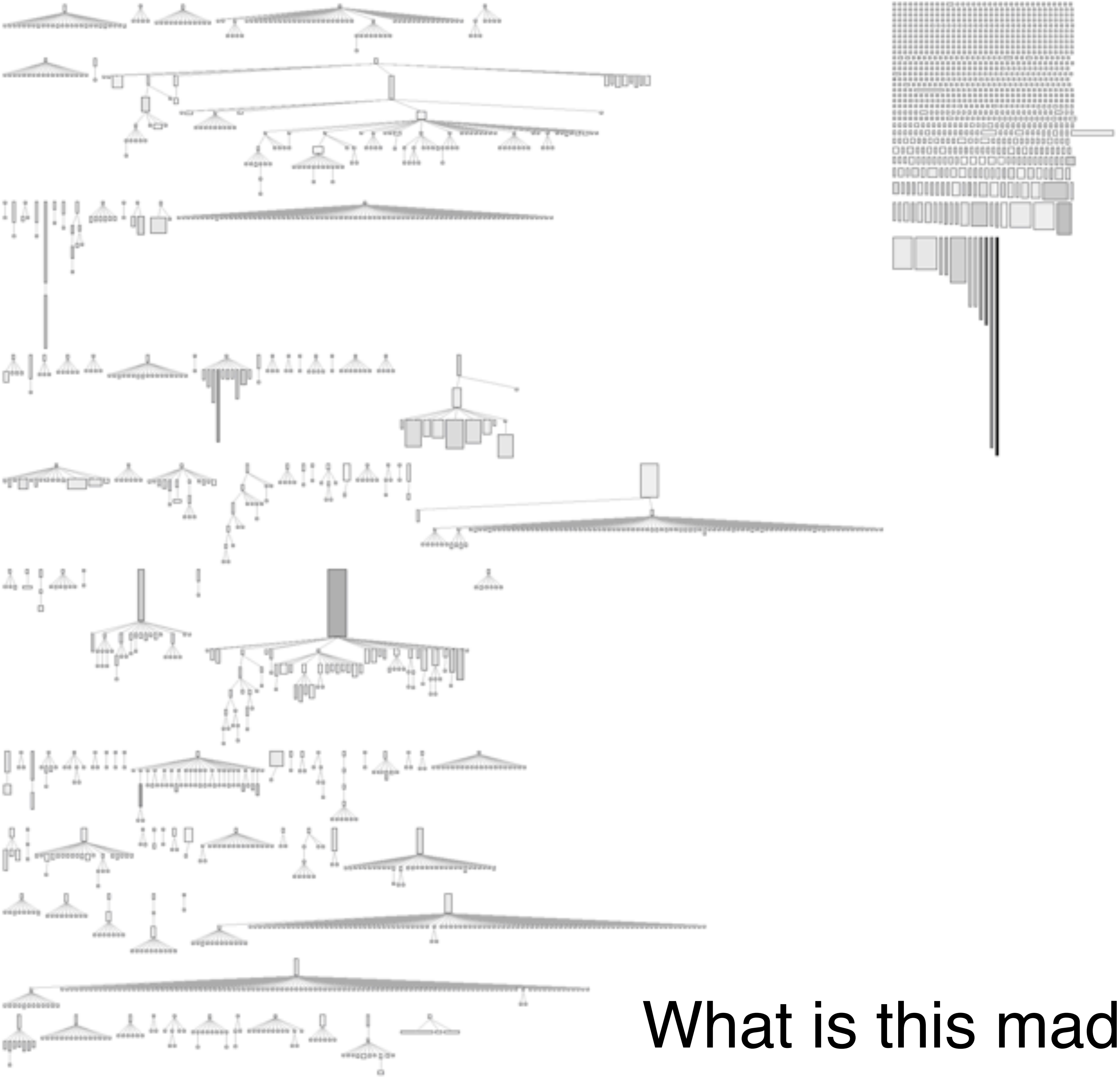
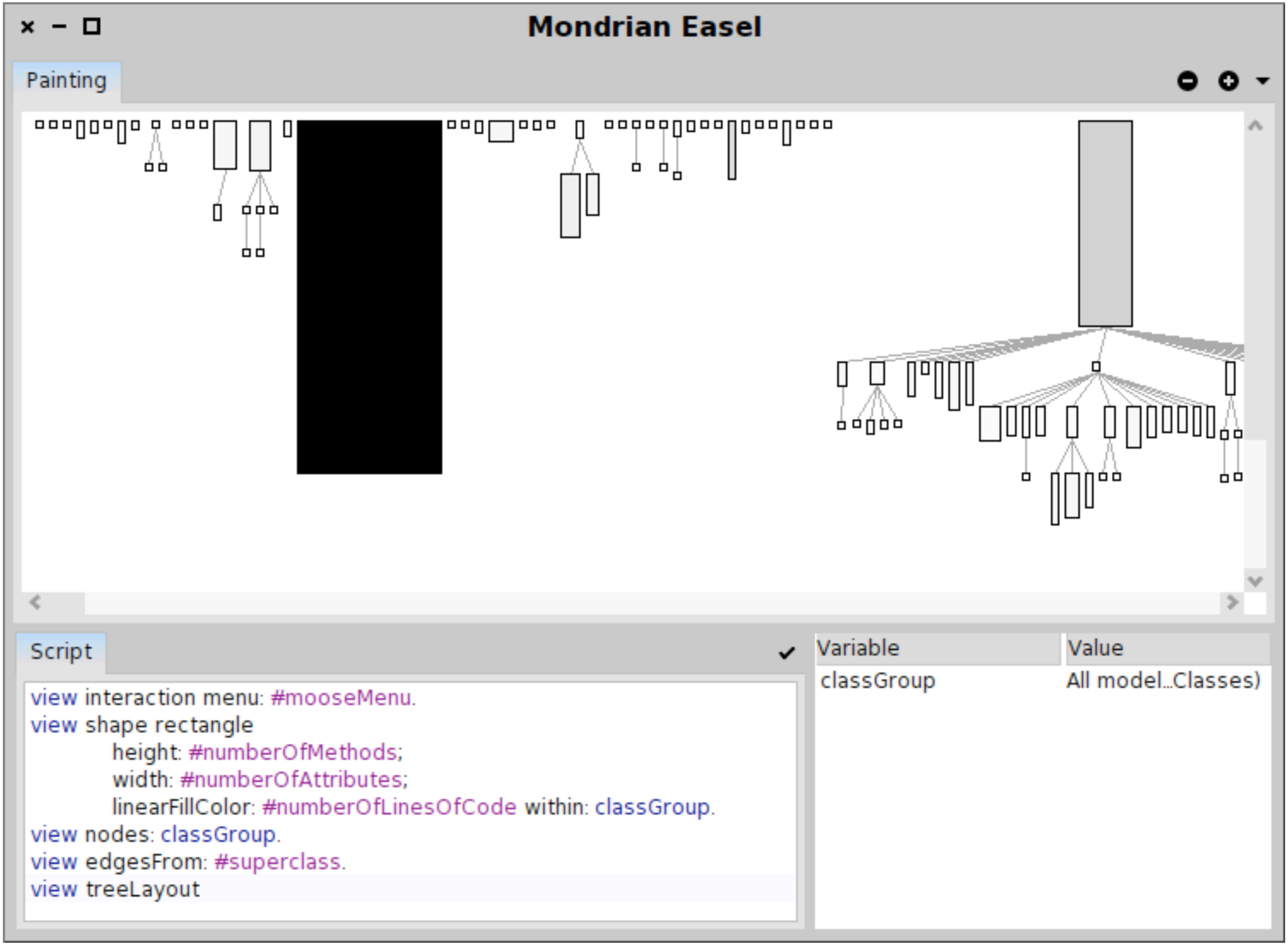
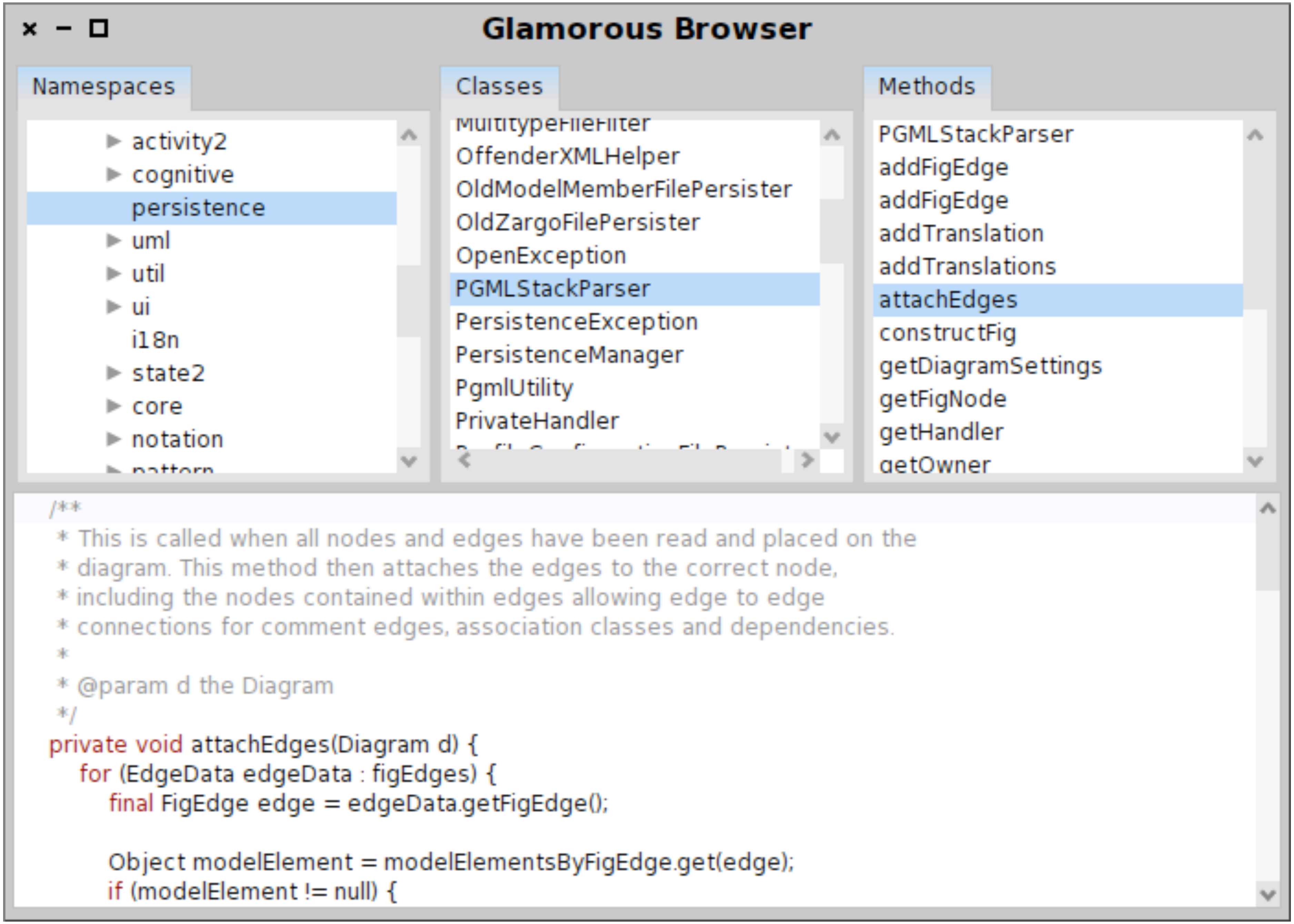


What is this made of?



```
view interaction menu: #mooseMenu.
view shape rectangle
          height: #numberOfMethods;
          width: #numberOfAttributes;
          linearFillColor: #numberOfLinesOfCode within: classGroup.
view nodes: classGroup.
view edgesFrom: #superclass.
view treeLayout
```

Variable	Value
classGroup	All model...Classes)



▶ activity2
▶ cognitive
persistence
▶ uml
▶ util
▶ ui
i18n
▶ state2
▶ core
▶ notation
▶ pattern

MultitypeFileFilter
OffenderXMLHelper
OldModelMemberFilePersister
OldZargoFilePersister
OpenException
PGMLStackParser
PersistenceException
PersistenceManager
PgmlUtility
PrivateHandler

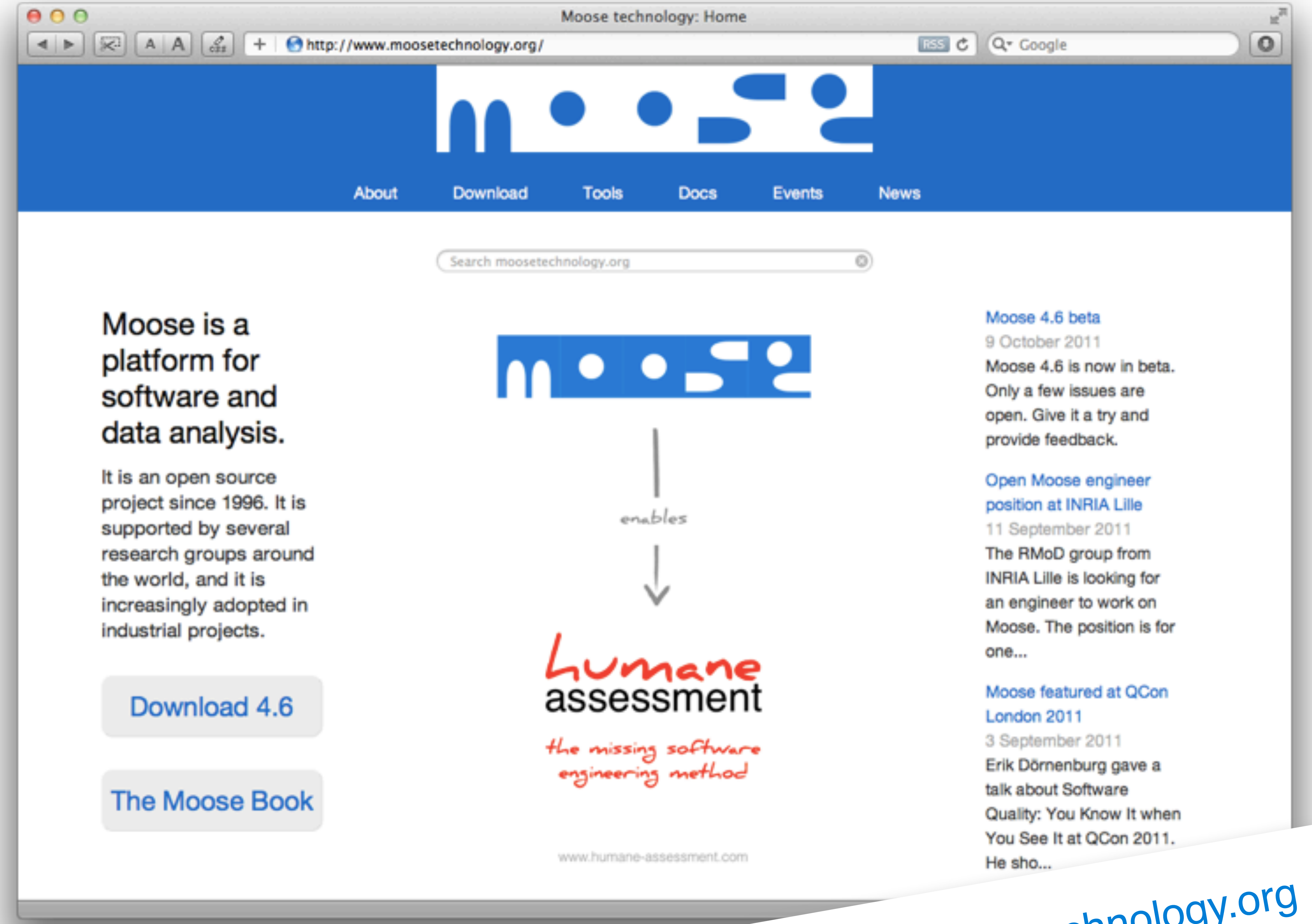
PGMLStackParser
addFigEdge
addFigEdge
addTranslation
addTranslations
attachEdges
constructFig
getDiagramSettings
getFigNode
getHandler
getOwner

```
/**
 * This is called when all nodes and edges have been read and placed on the
 * diagram. This method then attaches the edges to the correct node,
 * including the nodes contained within edges allowing edge to edge
 * connections for comment edges, association classes and dependencies.
 *
 * @param d the Diagram
 */
private void attachEdges(Diagram d) {
   for (EdgeData edgeData : figEdges) {
      final FigEdge edge = edgeData.getFigEdge();

      Object modelElement = modelElementsByFigEdge.get(edge);
      if (modelElement != null) {
```

What is this made of?

```
composer tabulator with: [:t |
  t row: [:r | r column: #namespaces;
                 column: #classes; column: #methods];
    row: #details.
  t transmit to: #namespaces; andShow: [:a |
    a tree
      title: 'Namespaces';
      display: [:m | m allNamespaces select: #isRoot ];
      children: #childScopes;
      format: #name ].
  t transmit from: #namespaces; to: #classes; andShow: [:a |
    a list
      title: 'Classes';
      display: [:n | n classes ];
      format: #name].
  t transmit from: #classes; to: #methods; andShow: [:a |
    a list
      title: 'Methods';
      display: [:c | c methods ];
      format: #name].
  t transmit from: #methods; to: #details; andShow: [:a |
    a text
      display: #formattedSourceText ]
    ].
composer openOn: model
```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Moose is a platform for software and data analysis.

It is an open source project since 1996. It is supported by several research groups around the world, and it is increasingly adopted in industrial projects.

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Moose 4.6 beta
9 October 2011
Moose 4.6 is now in beta. Only a few issues are open. Give it a try and provide feedback.

Open Moose engineer position at INRIA Lille
11 September 2011
The RMoD group from INRIA Lille is looking for an engineer to work on Moose. The position is for one...

Moose featured at QCon London 2011
3 September 2011
Erik Dörnenburg gave a talk about Software Quality: You Know It when You See It at QCon 2011. He sho...

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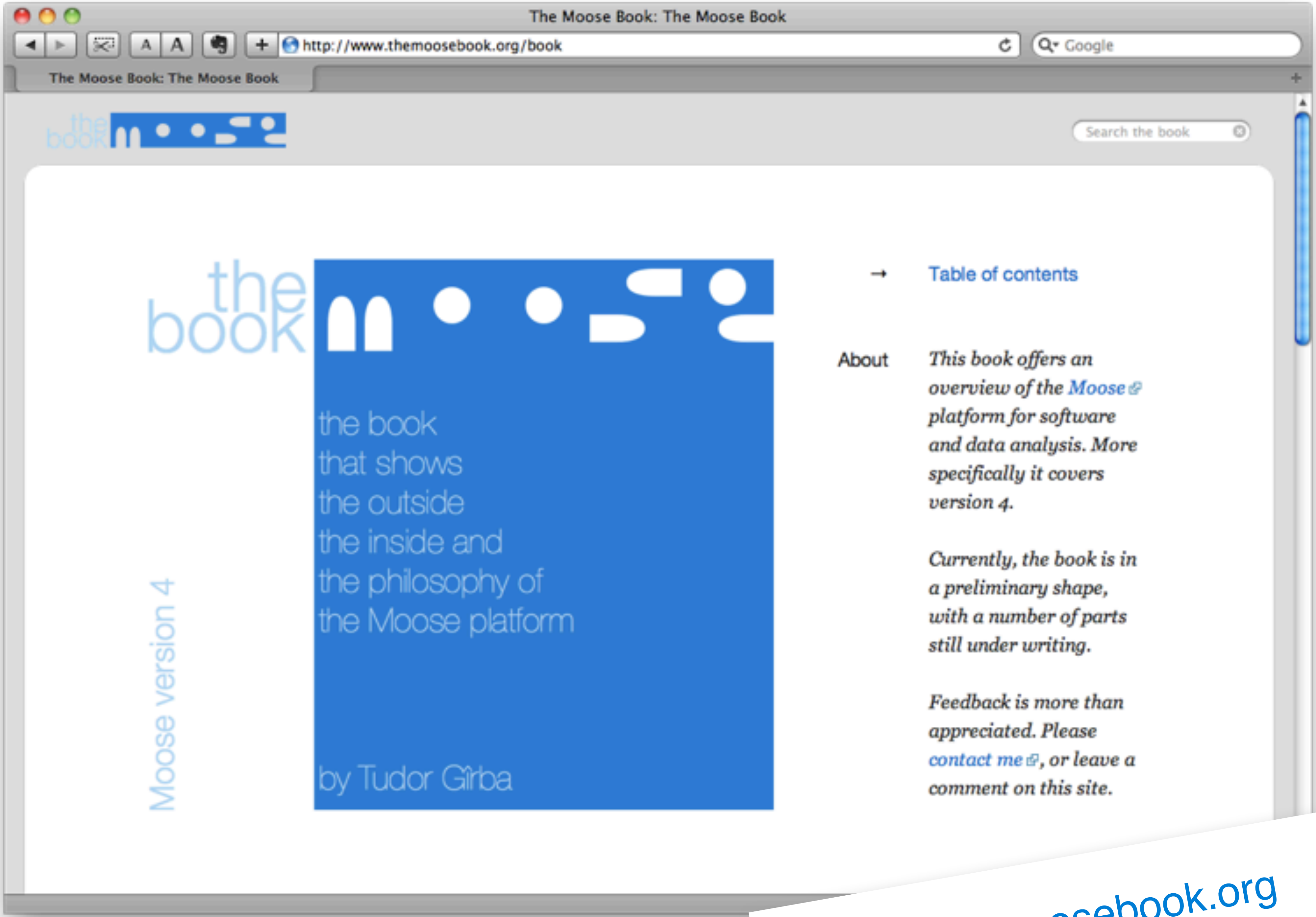

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the book that shows the outside the inside and the philosophy of the Moose platform
by Tudor Gîrba
Moose version 4
→ Table of contents

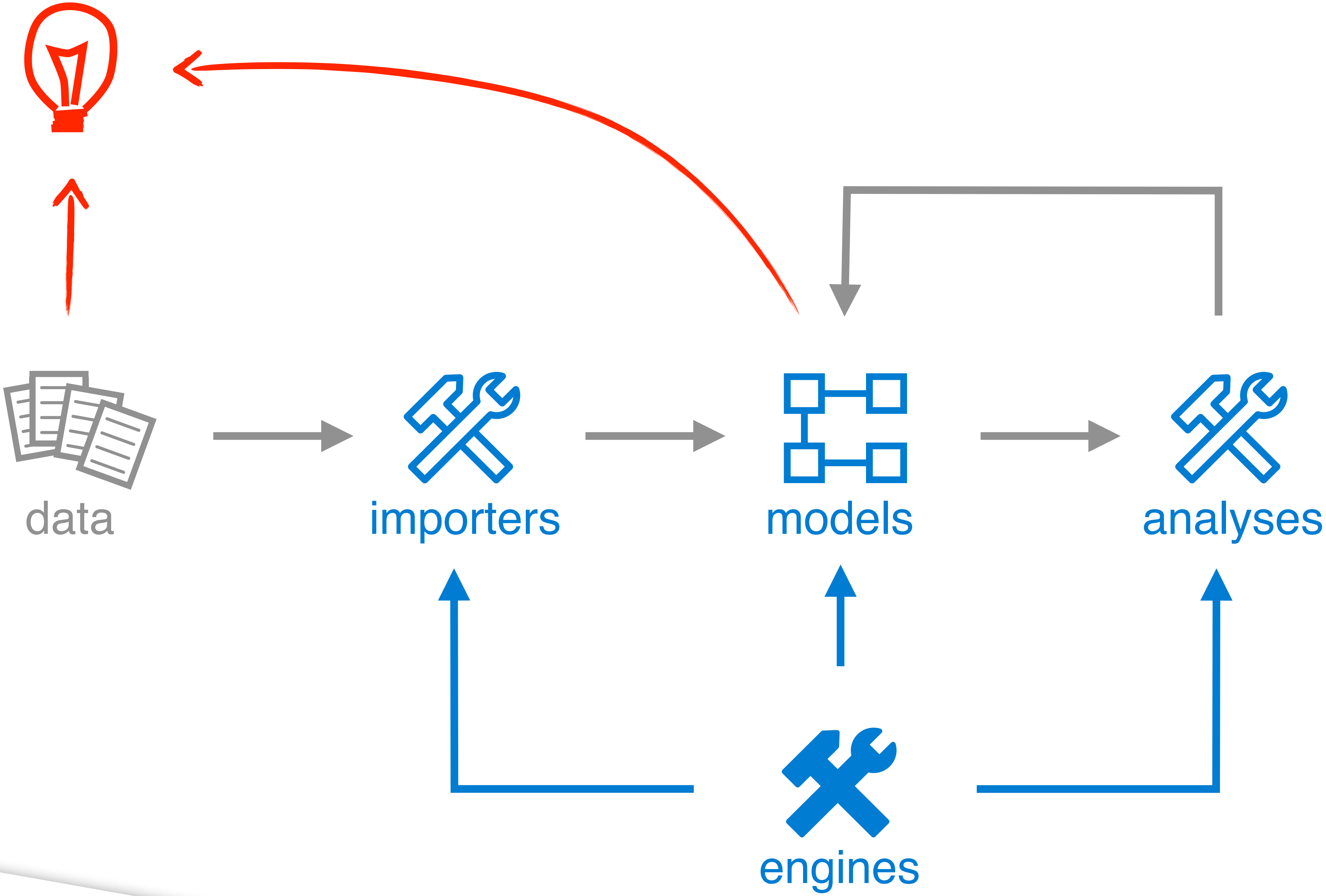
About

This book offers an overview of the Moose platform for software and data analysis. More specifically it covers version 4.

Currently, the book is in a preliminary shape, with a number of parts still under writing.

Feedback is more than appreciated. Please contact me, or leave a comment on this site.

themoosebook.org



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analyses

engines

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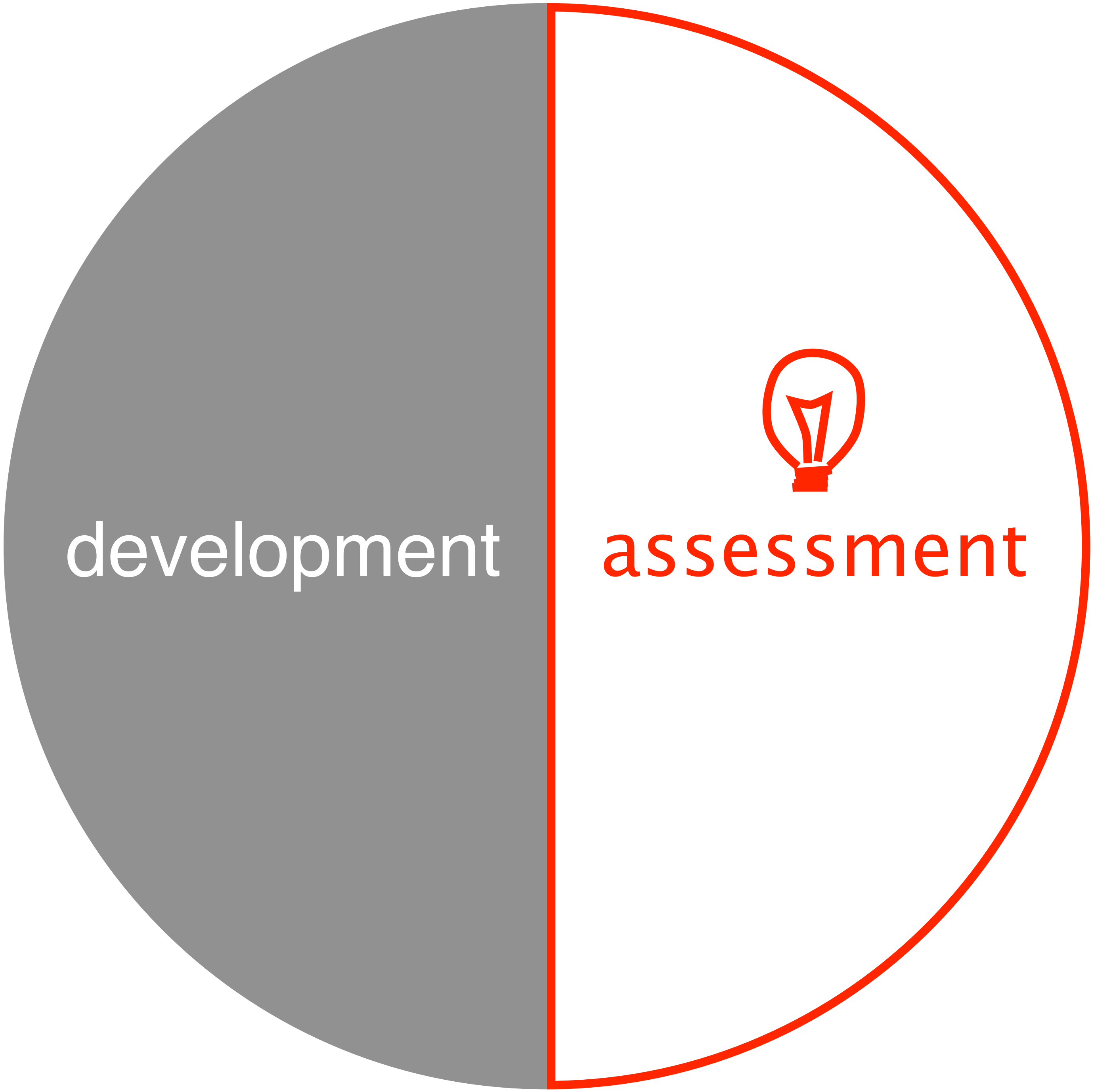
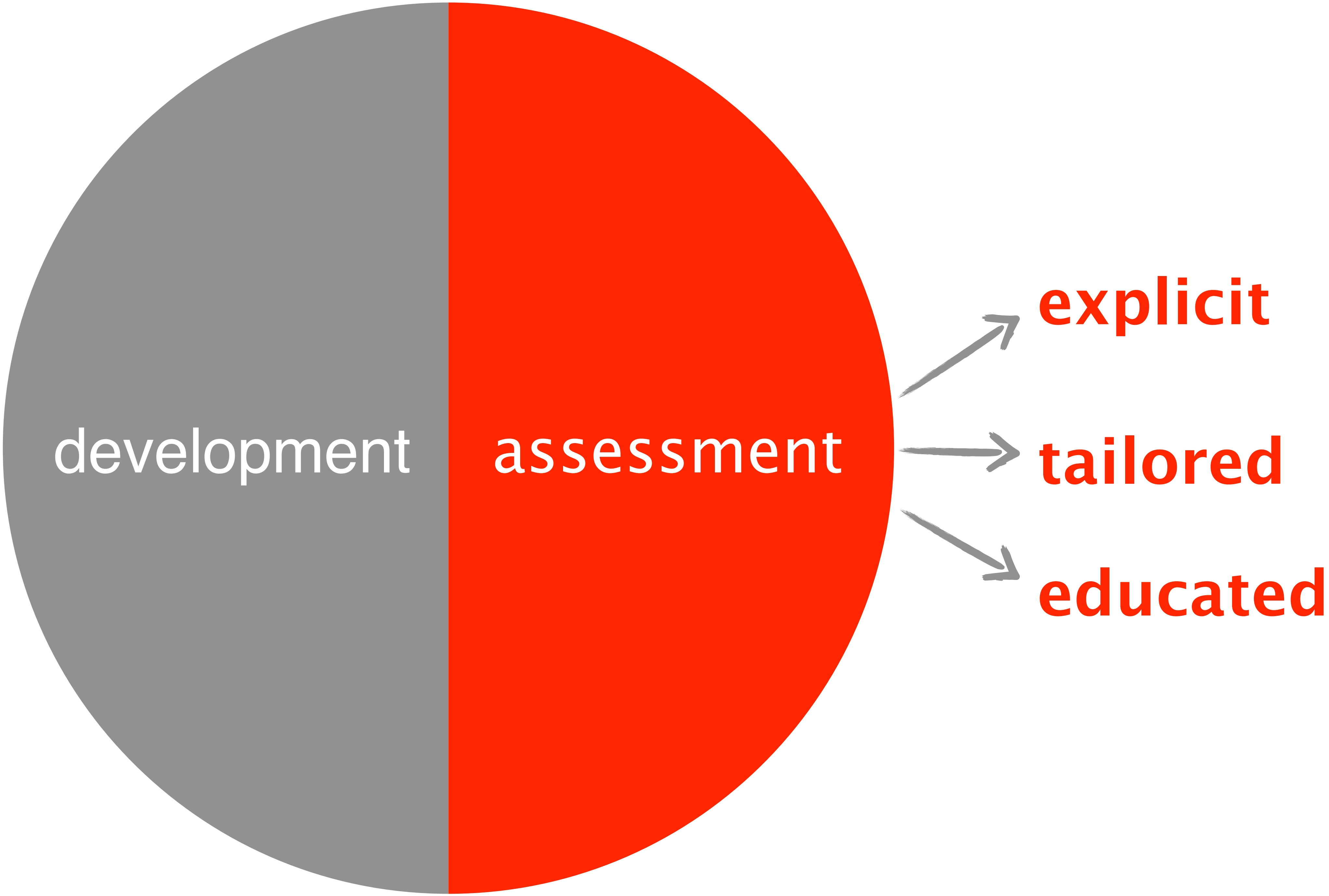


development

assessment

development

assessment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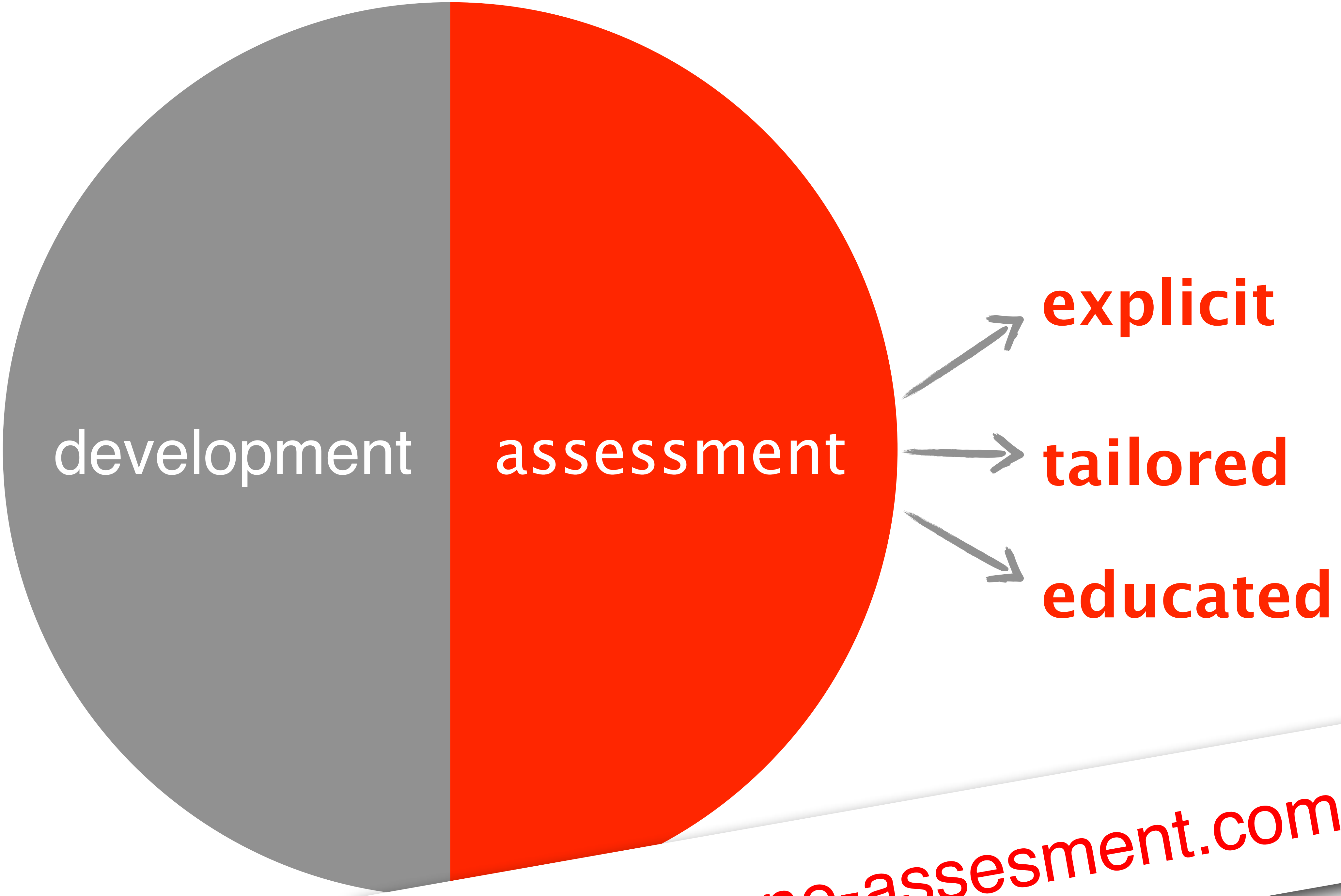
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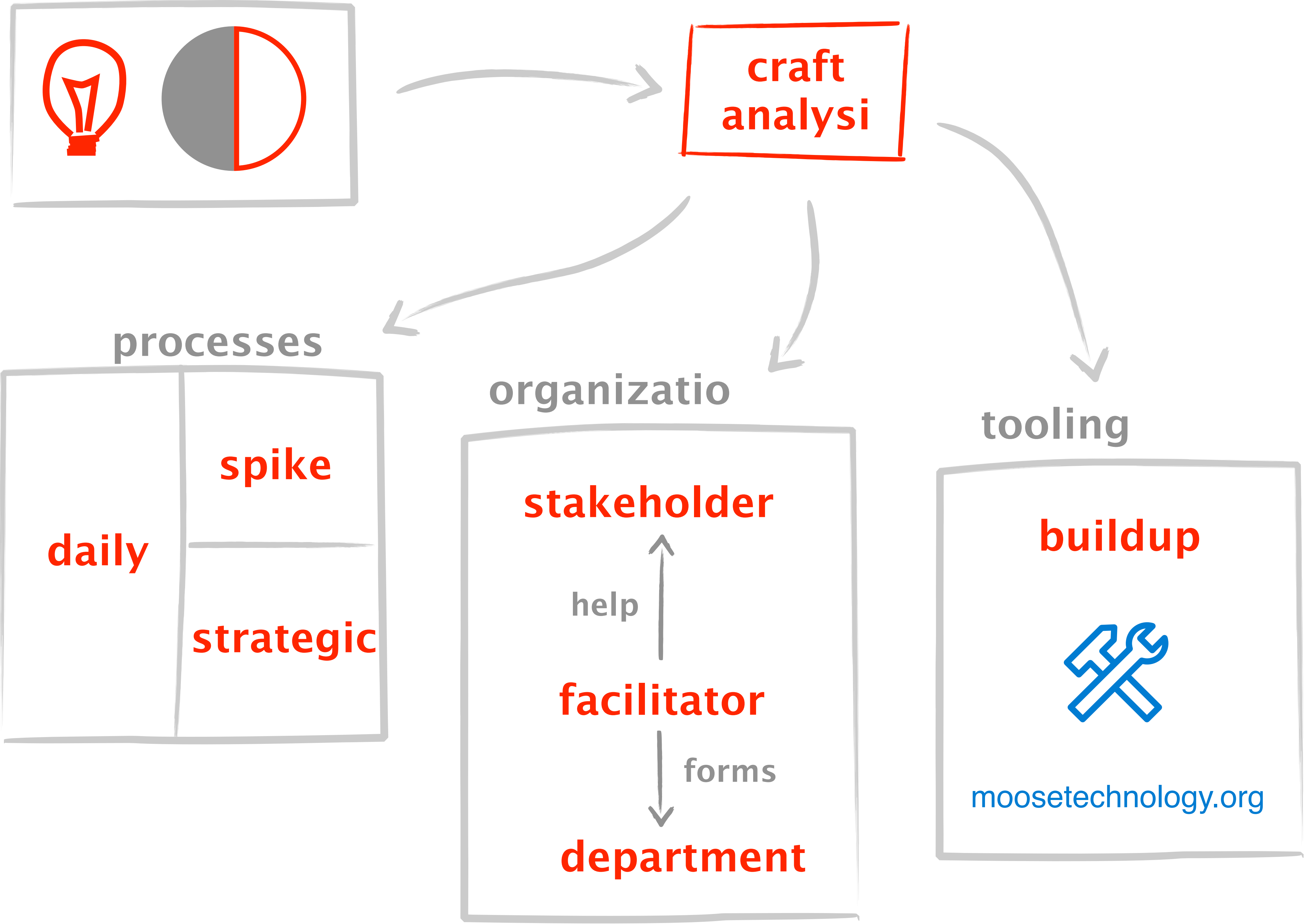

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