

*ArrangeMe*<sup>™</sup> is an IBM<sup>®</sup> DOORS<sup>®</sup> accelerator product from  
River North Solutions

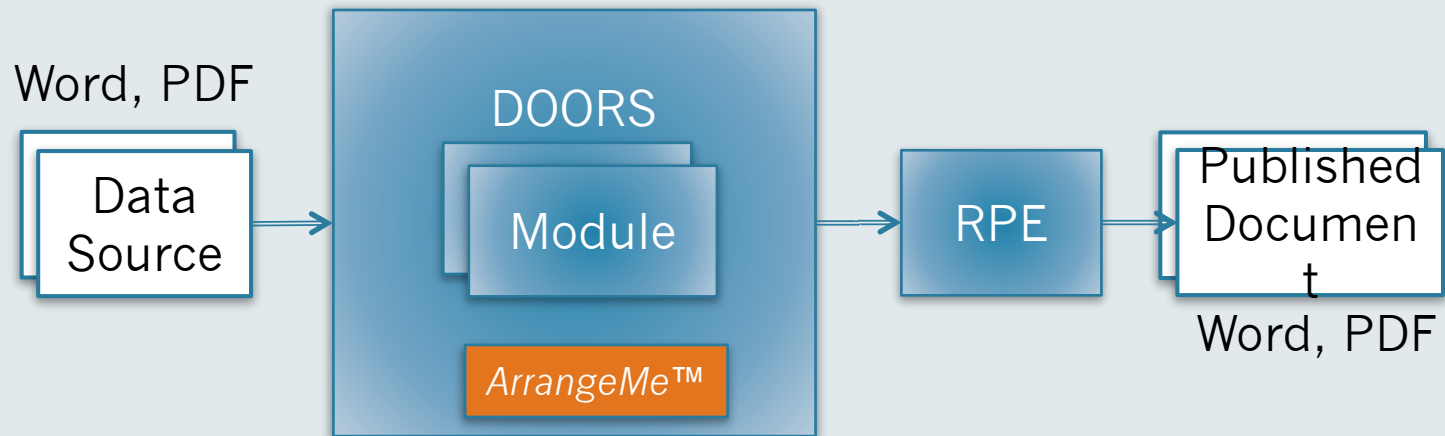


# *ArrangeMe*<sup>™</sup> Tool for DOORS

*ArrangeMe*<sup>™</sup> automates data manipulation, movement  
and modifications

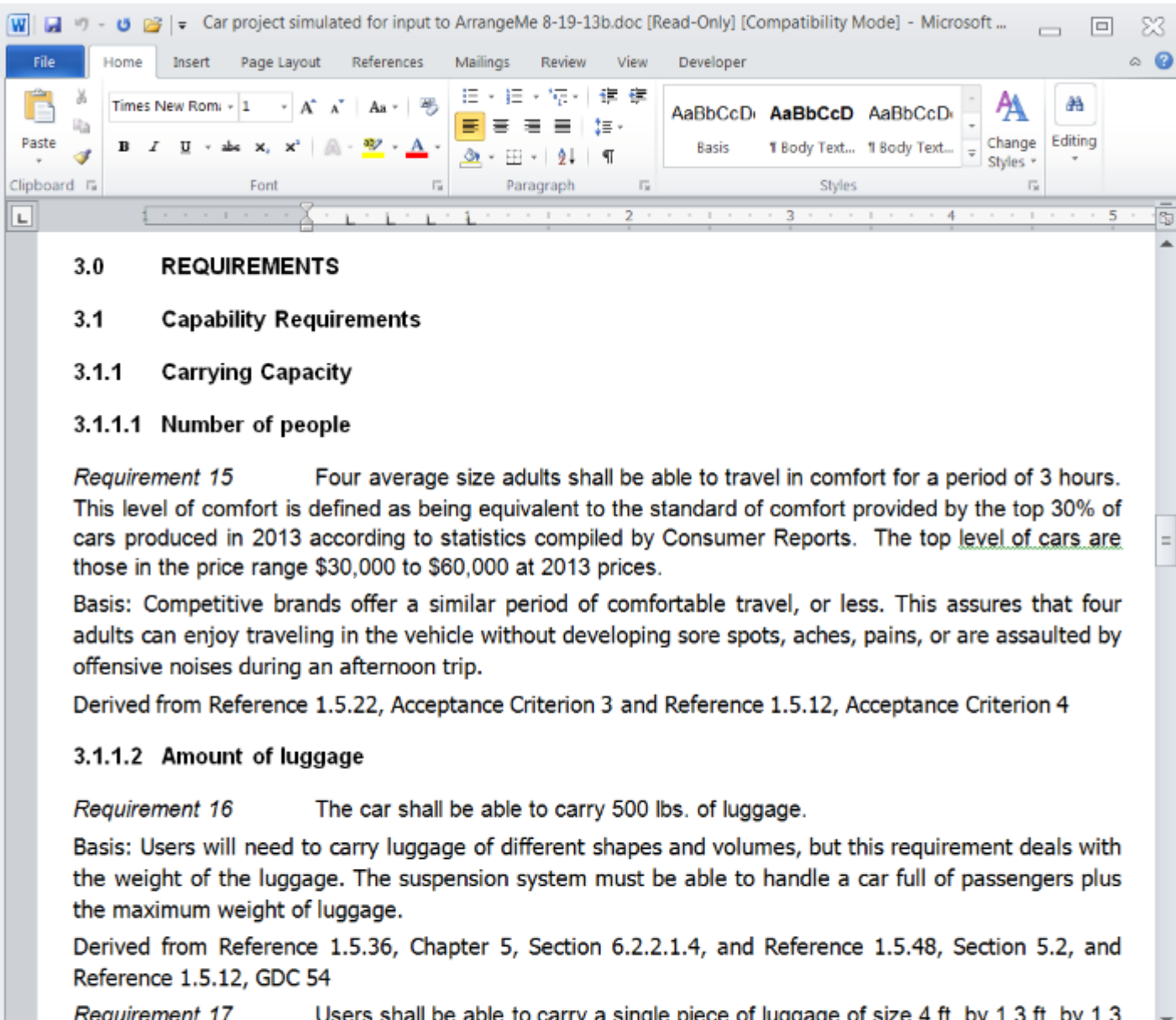
## What is *ArrangeMe*™?

Typical  
use case  
for source  
data



*ArrangeMe*™ automates the typically labor intensive effort of moving data around in DOORS after import

# Data Manipulation – Source Data in Word



The screenshot shows a Microsoft Word document titled "Car project simulated for input to ArrangeMe 8-19-13b.doc [Read-Only] [Compatibility Mode] - Microsoft ...". The ribbon is set to "Home" with the "Font" and "Paragraph" groups visible. The document content is as follows:

- 3.0 REQUIREMENTS**
- 3.1 Capability Requirements**
- 3.1.1 Carrying Capacity**
- 3.1.1.1 Number of people**
- Requirement 15* Four average size adults shall be able to travel in comfort for a period of 3 hours. This level of comfort is defined as being equivalent to the standard of comfort provided by the top 30% of cars produced in 2013 according to statistics compiled by Consumer Reports. The top level of cars are those in the price range \$30,000 to \$60,000 at 2013 prices.

Basis: Competitive brands offer a similar period of comfortable travel, or less. This assures that four adults can enjoy traveling in the vehicle without developing sore spots, aches, pains, or are assaulted by offensive noises during an afternoon trip.

Derived from Reference 1.5.22, Acceptance Criterion 3 and Reference 1.5.12, Acceptance Criterion 4
- 3.1.1.2 Amount of luggage**
- Requirement 16* The car shall be able to carry 500 lbs. of luggage.

Basis: Users will need to carry luggage of different shapes and volumes, but this requirement deals with the weight of the luggage. The suspension system must be able to handle a car full of passengers plus the maximum weight of luggage.

Derived from Reference 1.5.36, Chapter 5, Section 6.2.2.1.4, and Reference 1.5.48, Section 5.2, and Reference 1.5.12, GDC 54
- Requirement 17* Users shall be able to carry a single piece of luggage of size 4 ft. by 13 ft. by 13



# Word data transferred into DOORS

'Car user reqts - Static ArrangeMe demo' current 0.4 (TEST) in /Sandbox (Formal module) - DOORS

File Edit View Insert Link Analysis Table Tools Discussions User Publish Ambiguous Words Detector Kitchen PSToolbox  
RiverNorth Change Management Help

View Default All levels

ID	Car user requirements parsed in
UR7	<b>3 Requirements</b>
UR8	<b>3.1 Capability Requirements</b>
UR9	<b>3.1.1 Carrying Capacity</b>
UR10	<b>3.1.1.1 Number of people</b>
UR12	Four average size adults shall be able to travel in comfort for a period of 3 hours. This level of comfort is defined as being equivalent to the standard of comfort provided by the top 30% of cars produced in 2013 according to statistics compiled by Consumer Reports. The top level of cars are those in the price range \$30,000 to \$60,000 at 2013 prices.
UR312	Basis: Competitive brands offer a similar period of comfortable travel, or less. This assures that four adults can enjoy traveling in the vehicle without developing sore spots, aches, pains, or are assaulted by offensive noises during an afternoon trip.
UR313	Derived from Reference 1.5.22, Acceptance Criterion 3 and Reference 1.5.12, Acceptance Criterion 4
UR18	<b>3.1.1.2 Amount of luggage</b>
UR19	The car shall be able to carry 500 lbs. of luggage.
UR314	Basis: Users will need to carry luggage of different shapes and volumes, but this requirement deals with the weight of the luggage. The suspension system must be able to handle a car full of passengers plus the maximum weight of luggage.
UR318	Derived from Reference 1.5.36, Chapter 5, Section 6.2.2.1.4, and Reference 1.5.48, Section 5.2, and Reference 1.5.12, GDC 54
UR20	Users shall be able to carry a single piece of luggage of size 4 ft. by 1.3 ft. by 1.3 ft. totally within the car.
UR316	Basis: Users will need to be able to fit various smaller pieces of luggage into the vehicle, but this requirement deals with the largest dimensions of a single piece of luggage that must fit in the vehicle. This requirement enables the vehicle to handle a large box from an electronics store, a moving box, or large suitcase.
UR317	Derived from Reference 1.5.12, GDC 55

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Car project simulated for in

File Home Insert Page Layout Reference

Times New Rom. 1 A A Aa

Paste B I U abc x x

Clipboard Font

**3.0 REQUIREMENTS**

**3.1 Capability Requirement**

**3.1.1 Carrying Capacity**

**3.1.1.1 Number of people**

*Requirement 15* Four aver

This level of comfort is defined as

cars produced in 2013 according

those in the price range \$30,000 t

Basis: Competitive brands offer

adults can enjoy traveling in the v

offensive noises during an afterno

Derived from Reference 1.5.22, Acceptance Criterion 3 and Reference 1.5.12, Acceptance Criterion 4

**3.1.1.2 Amount of luggage**

*Requirement 16* The car shall be able to carry 500 lbs. of luggage.

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Derived from Reference 1.5.36, Chapter 5, Section 6.2.2.1.4, and Reference 1.5.48, Section 5.2, and Reference 1.5.12, GDC 54

*Requirement 17* Users shall be able to carry a single piece of luggage of size 4 ft. by 1.3 ft. by 1.3



# Data manipulation

'Car user reqts - Static ArrangeMe demo' current 0.4 (TEST) in /Sandbox (Formal module) - DOORS

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UR312	Basis: Competitive brands offer a similar period of comfortable travel, or less. This assures that four adults can enjoy traveling in the vehicle without developing sore spots, aches, pains, or are assaulted by offensive noises during an afternoon trip.
UR313	Derived from Reference 1.5.22, Acceptance Criterion 3 and Reference 1.5.12, Acceptance Criterion 4
UR18	<b>3.1.1.2 Amount of luggage</b>

'Car user reqts - Static ArrangeMe demo' current 0.4 (TEST) in /Sandbox (Formal module) - DOORS

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UR18	The car shall be able to carry 500 lbs. of luggage.	Users will need to carry luggage of different shapes and volumes, but this requirement deals with the weight of	Derived from Reference 1.5.36, Chapter 5, Section 6.2.2.1.4, and Reference

# Accelerate Requirements Management

## ArrangeMe™ Rule Manager

Rules Manager - ArrangeMe v0.1 by River North Solutions - DOORS

Use ArrangeMe to create rules to automatically process data in this DOORS module or a group of modules.

User-Defined Rules

RULE NAME	IDENTIFY	ACTION 1	ACTION 2
Reference Rule	"Reference" in Object Text	Move to Reference in previous object identified by Requirement Rule	Soft Delete Object
Basis Rule	"Basis" in Object Text	Move to Basis in previous object identified by Requirement Rule	Soft Delete Object
Requirement Rule	"shall" in Object Text	Class = Requirement	Do Nothing

Buttons: Insert New Rule, Remove Rule(s), Load Rule Set, Save Rule Set, Save Rule Set As, Delete Rule Set

Scope of Operation...

Current View  
 Several Modules

Browse

Create Private Summary View...

Create view

Buttons: Help, Test Rule Set, Process Rule Set, Cancel

Build A Rule

1. Define Rule Name...  
Enter a string...  
Reference Rule

2. Identify Object...

By a string  
 By attribute value  
 By sequence

By A String  
Enter a string or regular expression...  
Reference

Find string in attribute...  
Object Text

By Attribute Value  
Choose an enumeration type attribute...  
Requirement

By Sequence  
 Before  
 After

Identify object: Select supporting rule...  
Reference Rule

3. Select First Action...

Set attribute value of identified object  
 Move identified content to attribute  
 Soft delete object  
 Do nothing

Set Attribute Value of Identified Object  
Choose an enumeration type attribute...  
Class

Define attribute value  
Requirement

Move identified Content to Attribute  
Choose a string or text type attribute...  
Reference

Choose a destination object...

In identified object  
 In a different object

Previously identified object  
 Next identified object

Identify object: Select supporting rule...  
Reference Rule

4. Select Second Action...

Promote Object  
 Demote Object  
 Soft delete object  
 Do nothing

Buttons: Help, Add to Rule Set, Close

Rule Set Manager

Rule Builder

# Accelerate Requirements Management


## ArrangeMe™ Rule Manager

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Requirement Rule	"shall" in Object Text	Class = Requirement	Do Nothing

Build A Rule

1. Define Rule Name...  
Enter a string...  
Reference Rule

2. Identify Object...  
 By a string  
 By attribute value

3. Select First Action...  
 Set attribute value of identified object  
 Move identified content to attribute  
 Soft delete object  
 Do nothing  
Set Attribute Value of Identified Object

Select attribute value...  
Acceptable

By Sequence  
 Before  
 After

Identify object: Select supporting rule...  
Reference Rule

4. Select Second Action...  
 Promote Object  
 Demote Object  
 Soft delete object  
 Do nothing

Scope of Operation...  
 Current View  
 Several Modules

Create Private Summary View...  
 Create view

Buttons: Insert New Rule, Remove Rule(s), Load Rule Set, Save Rule Set, Save Rule Set As, Delete Rule Set, Help, Test Rule Set, Process Rule Set, Cancel, Add to Rule Set, Close

# Accelerate Requirements Management Before ArrangeMe™ Execution

'Car user reqts' current 0.4 (TEST) in /Car Project for Testing (Formal module) - DOORS

File Edit View Insert Link Analysis Table Tools Discussions User Publish Ambiguous Words Detector Kitchen PSToolbox RiverNorth Change Management Help

View Standard view All levels

ID	Car user requirements parsed in	Basis	Reference	Class
UR24	<b>3.1.2 Movement</b>			
UR25	<b>3.1.2.1 Speed and Acceleration</b>			
UR26	<b>3.1.2.1.1 Forwards</b>			
UR27	Users shall be able to travel at speeds up to 200 miles per hour.			
UR316	Basis: Some jurisdictions allow high speeds, such as Germany.			
UR317	Reference: Reference 8, Section (c)(3)			
UR28	Users shall be able to accelerate from 0 to 100 miles per hour in 10 seconds.			
UR318	Basis: Need to compete with acceleration performance of top 30% of luxury sedans on the market.			
UR319	Reference: Reference 8, Section (c)(4)(i)			
UR29	Users shall be able to travel automatically at predefined speeds.			
UR320	Basis: Cruise control is standard on top 70% of sedans on the market.			
UR321	Reference: Reference 7, Section III, D, 1, a and III, D,1, b			
UR31	<b>3.1.2.1.2 Backwards</b>			
UR32	Users shall be able to move backwards to a maximum speed of 20 miles per hour.			
UR322	Basis: Rearward motion is a secondary function of the vehicle and high speeds are not needed.			
UR324	Reference: Reference 7, Section III, D, 2, a			
UR33	<b>3.1.2.2 Distance</b>			
UR34	Users shall be able to travel 1000 miles without the need for any form of additional fuel.			
UR128	Users shall be able to travel 1500 miles without the need for any form of additional fuel.			

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# ArrangeMe™ – Rule Set Execution

User-Defined Rules			
RULE NAME	IDENTIFY	ACTION 1	ACTION 2
Reference Rule	"Reference" in Object Text	Move to Reference in previous object identified by Requirement Rule	Soft Delete Object
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UR318	Basis: Need to compete with acceleration performance of top 30% of luxury sedans on the market.			
UR319	Reference: Reference 8, Section (c)(4)(i)			
UR29	Users shall be able to travel automatically at predefined speeds.	Basis: Cruise control is standard on top 70% of sedans on the market.	Reference: Reference 7, Section III, D, 1, a and III, D,1, b	Requirement
UR320	Basis: Cruise control is standard on top 70% of sedans on the market.			
UR321	Reference: Reference 7, Section III, D, 1, a and III, D,1, b			
UR31	<b>3.1.2.1.2 Backwards</b>			

# ArrangeMe™ – Rule Set Execution

User-Defined Rules

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UR321	Reference: Reference 7, Section III, D, 1, a and III, D,1, b			
UR331	<b>3.1.2.1.2 Backwards</b>			

# ArrangeMe™ – Rule Set Execution

User-Defined Rules

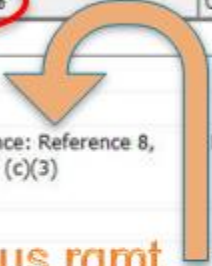
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UR321	<del>Reference: Reference 7, Section III, D, 1, a and III, D,1, b</del>			
UR321	<b>3.1.2.1.2 Backwards</b>			



# Automated Data Manipulation in DOORS

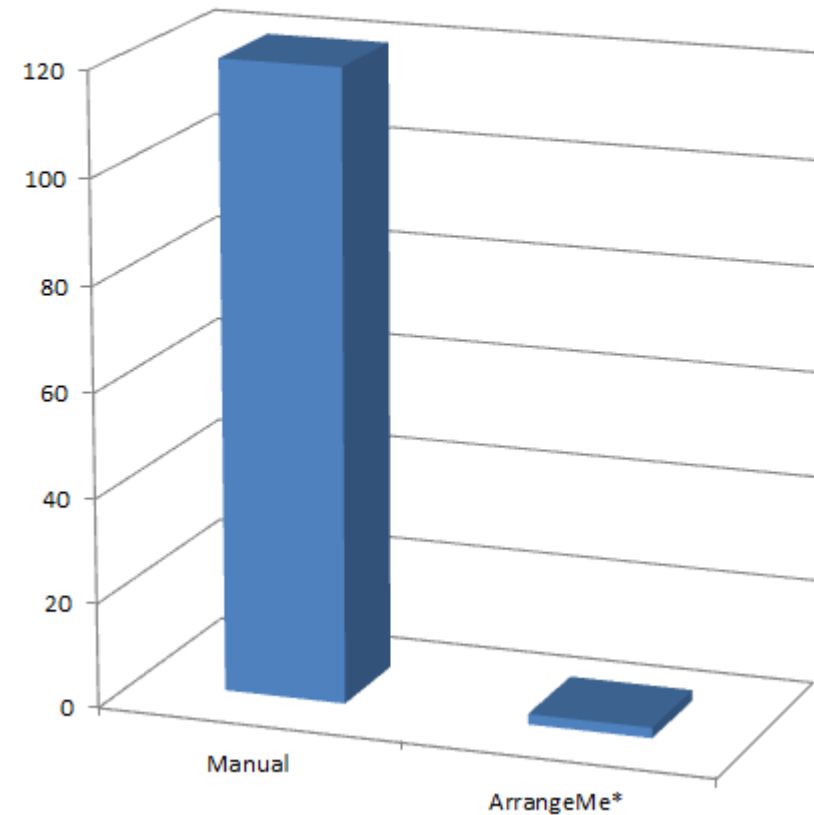
## *ArrangeMe*<sup>™</sup> Workflow

- User defines patterns in data
  - e.g. ‘Shall’
  - Key words such as Rationale, Exception, Reference
- User defines ‘rules’ = user-defined automation behavior
  - Move *Rationale* statement to attribute ‘Rationale’ in nearest requirement, soft delete original object containing Rationale
  - Move *Exception* statement to attribute ‘Exception’ in nearest requirement, soft delete original object containing Exception
- User processes Rule Set in *ArrangeMe*<sup>™</sup>
- *ArrangeMe*<sup>™</sup> optionally reports on activities performed
  - View created showing actions performed
- Data manipulation scope can be current view or multiple modules

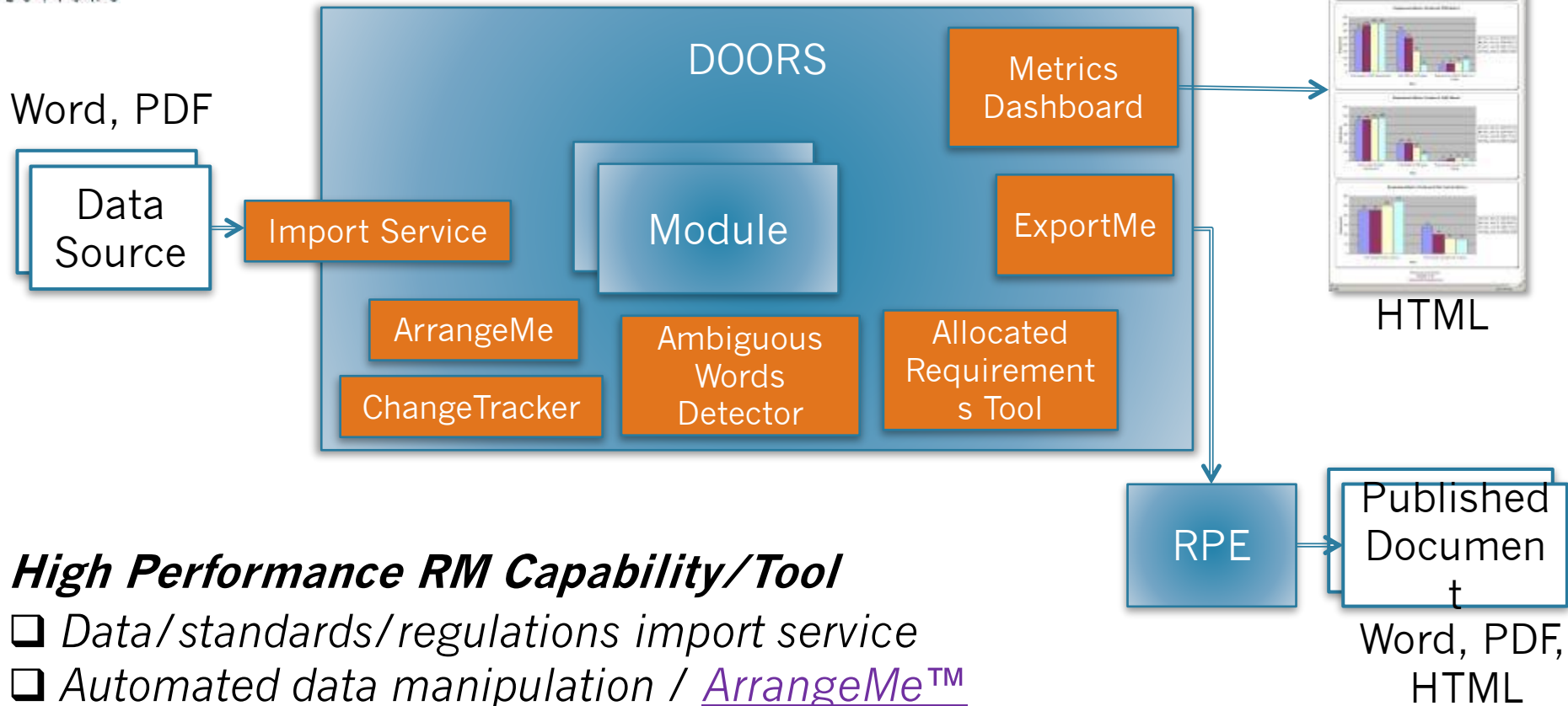
# ArrangeMe™ Value Proposition

- Fortune 150 company
  - Thousands of documents
  - Many hundreds of pages per document
  - Import/data manipulation in DOORS
    - **Typical manual effort -> Avg 3 weeks/document**
    - **Using *ArrangeMe™* -> avg 2 hours/document**

**Post DOORS Import Data Manipulation  
(avg manhours/document)**



# River North Accelerator Tools for Requirements Management & Document Publishing



## **High Performance RM Capability/Tool**

- Data/standards/regulations import service
- Automated data manipulation / [ArrangeMe™](#)
- Boost requirement quality, reduce churn / [Ambiguous Words Detector™](#)
- Automated, simplified, consistent document publishing / [ExportMe™](#)
- Monitor leading indicator trends / [Metrics Dashboard™](#)
- Display revision markup using rich text / [ChangeTracker™](#)
- Reuse requirements / [Allocated Requirements Tool™](#)

# River North Profile – Industries/Clients\*, Products

- **Aerospace & Defense**
  - Aerojet Rocketdyne
  - Boeing
  - Collins Aerospace
  - Crane Aerospace
  - LMCO-NASA
  - NASA JPL
  - Northrop Grumman
- **Energy**
  - NuScale Power
  - Sandia National Labs
  - Westinghouse Nuclear
- **Automotive**
  - Ford Motor Company
  - Honda Motor Company
  - Johnson Controls
- **Medical Device**
  - Ameda
  - Ascensia Diabetes Care
  - Baxter Healthcare
  - Bayer Healthcare
  - Eli Lilly
  - Hospira
  - J&J Vision
  - Roche Diagnostics
  - St. Jude Medical (Abbott)
- **Semiconductor**
  - NXP Semiconductors
- **Transportation**
  - Ansaldo STS
  - Bombardier Transportation
  - GE Transportation
- **Telecommunications**
  - Comcast
  - Motorola Solutions
- **Industrial**
  - Chamberlain
  - HP Enterprise Services

## DOORS Classic Accelerator Products from River North

- *Ambiguous Words Detector™ (AWD)* – boosts requirement quality by automatically detecting ambiguous words in DOORS
- *ArrangeMe™* – automated DOORS data manipulation/movement
- *Requirement Metrics Dashboard™ (RMD)* – automated metrics production for DOORS
- *ChangeTracker™* – revision markup displayed using rich text in DOORS
- *ExportMe™* – document publishing automation taken to a new level in DOORS
- *Allocated Requirements Tool™ (ART)* – facilitates requirement reuse in DOORS

### Contact Information

[www.rivernorthsolutions.com](http://www.rivernorthsolutions.com)  
[info@rivernorthsolutions.com](mailto:info@rivernorthsolutions.com)



\* Partial List



# For More Information...

- *ArrangeMe*<sup>™</sup> can be customized to suit your organization's needs
- Contact Bob Parro at [bparro@rivernorthsolutions.com](mailto:bparro@rivernorthsolutions.com)