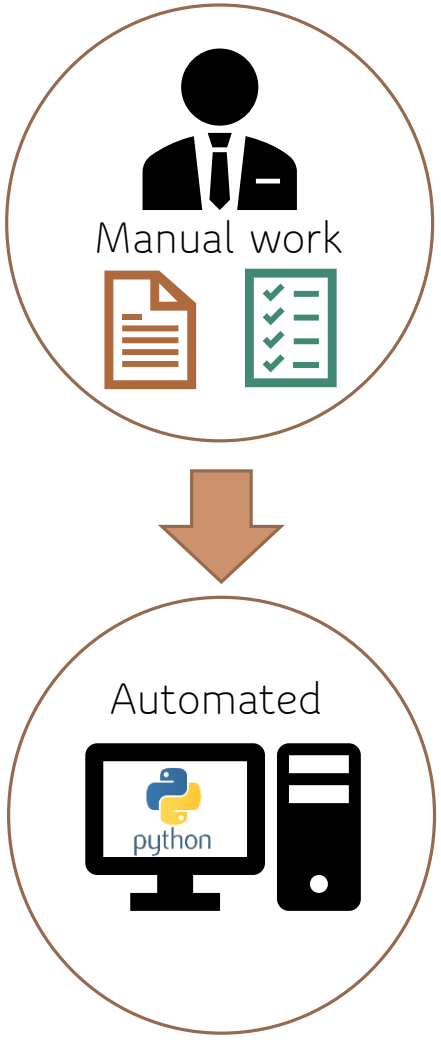
Define | Measure | Analyze | Improve | Next Steps



Automating the process of examining retired and published policy and procedure documents-

- To verify if retired documents are correctly made inactive
- To identify words in retired documents which are not covered in published documents

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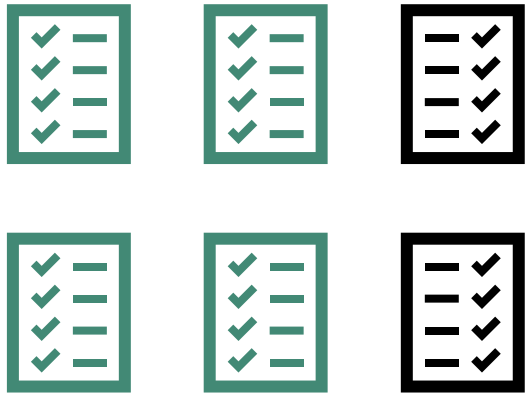


Published + Pending Approval
Policy & Procedure Documents

104

Retired
Policy & Procedure Documents

Define | Measure | Analyze | Improve | Next Steps

Time to read 1 document ~30 mins

Manual Reading

Average # of pages - 3

Total Documents - 150

~75 Hours

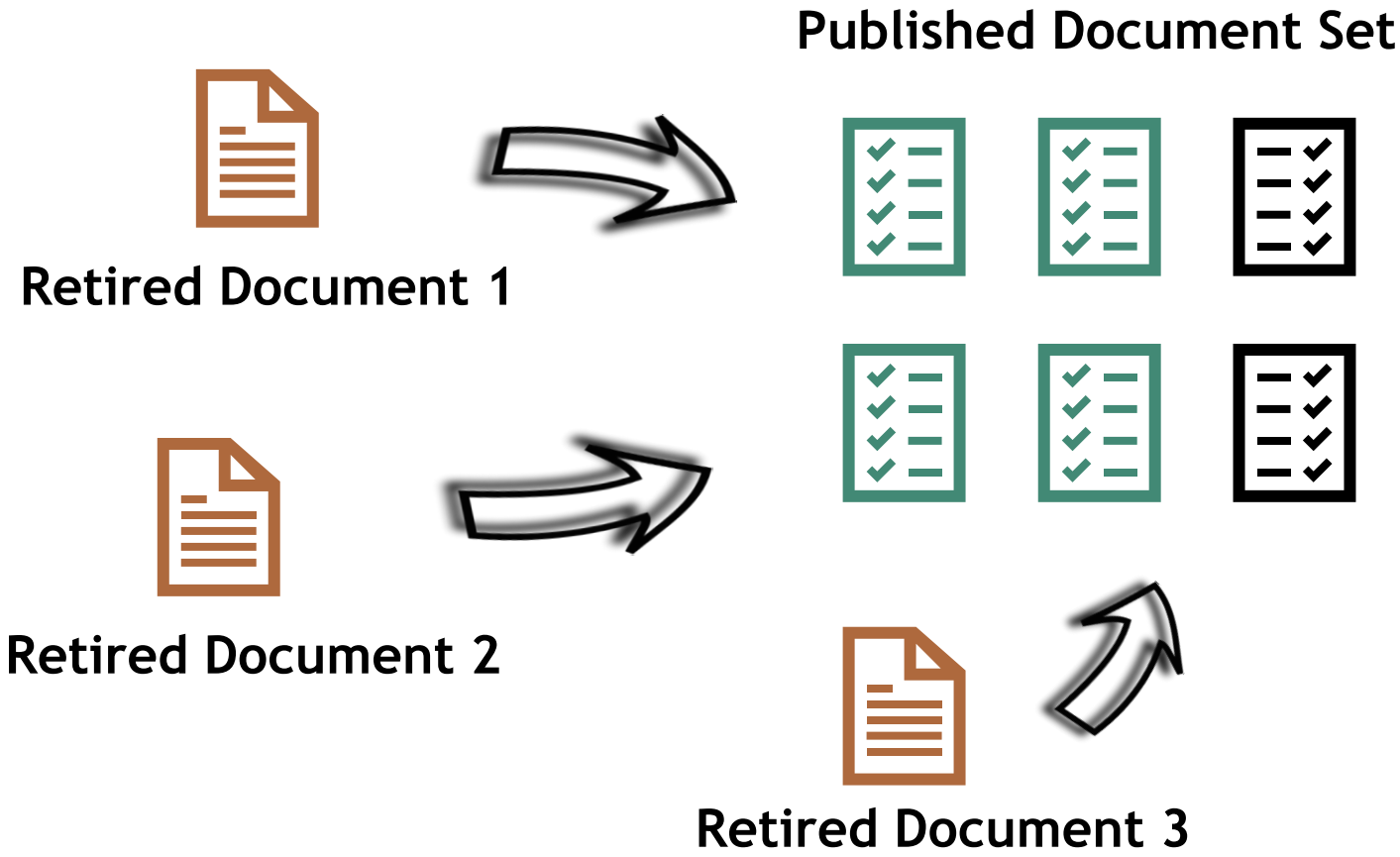
Define | Measure | Analyze | Improve | Next Steps

Topics	Published	Pending Approval	Retired	Total
Biomedical Engineering	7	1	4	12
Department Operating Policies	3	0	5	8
Facility Management	1	15	41	57
Supply Chain Informatics	0	5	1	6
Supply Chain Operations	8	2	41	51
Supply Chain SS &E	3	1	12	16

Define | Measure | Analyze | Improve | Next Steps

- Lowercase words
- Replace 1 or more white space with a a space
- Remove digits & Punctuation
- Remove stop words
- Lemmatize the words

Document Comparison



Document Similarity Score

Finding Similar words between individual Retired Documents and Corpus of Published Documents.
The % Similarity can be given by

$$\text{Documentation Similarity Score} = \frac{\text{Count of Similar Words}}{\text{Count of words in Retired Document}} \%$$

Define | Measure | Analyze | Improve | Next Steps

Earlier

Total Documents - 150

~75 Hours

Now

Total Documents - 150

~35 Second

Documentation Dissimilarity Score Threshold <= 95%

Topics	< 95%	95% <	% Review
Biomedical Engineering	0	4	0%
Department Operating Policies	0	5	0%
Facility Management	4	37	10%
Supply Chain Informatics	1	0	100%
Supply Chain Operations	4	37	10%
Supply Chain SS&E	0	12	0%
	9	95	9%

Document Matrix – Supply Chain Informatics

Topics	Published	Pending Approval	Retired	Total
Supply Chain Informatics	0	5	1	6

Retired	Supply Chain Informatics	Words
MM1650	90%	systematically', 'osborn', 'undergo', 'shall', 'warehouse', 'donofrio]', 'throughout', 'policy', 'originator', 'tpk', 'delivery', 'handbook', 'greenbaum', 'booklet', 'coordinator', 'necessary', 'john', 'healthcare', 'scottsdale', 'month'

Document Matrix- Facility Management

Topics	Published	Pending Approval	Retired	Total
Facility Management	1	15	41	57

Retired	Facility Management	Words
Management Policy Q530 Product and Equipment Recall and Hazard Notification Updated 063016	95%	'injury', 'extinguisher', 'hyperbaric', 'knowledge', 'noncombustible', 'goggles', 'extremely', 'atmosphere', 'outdoors', 'outdoors,'
Management Policy Q390 Fire Drills Updated 063016	95%	'unannounced', 'radiology', 'assembly', 'q'
Management Policy Q438 Oxygen _ Medical Gas Shutoff for Emergency Conditions Updated 063016	95%	'sufficient', 'anesthesiologist]', 'earthquake', 'jeopardize', 'gravity', 'likelihood', 'anesthesiologist', 'q', 'structural'

Management Policy A285 Project Development Updated	96%	modular', 'acknowledgment', 'throughout', 'everyone™s', 'architect', 'worksheet]'
Management Policy Q392 Inspection of Patient Electrical Personal Care Items Updated 063016	96%	'injury', 'q'
Management Policy A160 Meeting Space _ Equipment Reservation Updated 120115	96%	'neighborhood', 'committee', 'organizer', 'september', 'mob', 'gym', 'organizer]'
Facility Management Policy Q545	98%	'switchboard', 'q'
Facility Management Policy Q558	98%	'pbx', 'fl', 'q'
Procedure INTRO12 Interim Life Safety Measures	98%	'awareness', 'job', 'vehicle', 'it™s', 'committee', 'assembly', 'noncombustible', 'deficiency', 'islm', 'extinguishment', 'structural'

Management Policy A135 Minor Moves Equipment and Materials Updated 020111	96%	fisavefl', 'fidashboardfl', 'automatically', 'assembly', 'box', 'mm', 'via', 'equitably', 'bookshelf'
Management Policy SS1016 Asbestos Awareness Updated 123118 (2)	96%	knowledge', 'awareness', 'job', 'window', 'fixtureblocks', 'job,', 'wrap,', 'asbestos', 'asbestosfl', 'greenbaum', 'structural'
Management Policy A271 Furniture Purchases Updated 063016	96%	behalf,', 'lobby', 'modular', 'throughout', 'fabric', 'via', 'physician'
Management Policy Q313 Campus Hazard Surveillance Tours Updated 063016	96%	committee', 'q', 'committee™s'
Management Policy Q314 Environmental Safety Survey Rounds Updated 063016	96%	'injury', 'technology,', 'committee', 'technology', 'physician', 'q'
Management Policy Q531 Clinical Equipment Maintained by Outside Vendors Updated 063016	96%	'injury', 'technician', 'memoranda', 'phi]', 'q'

Management Policy Q402 Floods Major Leaks and Mold Cleaning Handling and Control Updated 063016 (2)	96%	'growth', 'committee', 'epidemiology', 'toolkit', 'rr', 'mmwr', 'varnish', 'q', 'structural', 'pg]', 'thoroughly'
Policy Q559 System Failure Medical Air Updated	97%	'pbx', 'fl', 'q'
Management Policy A520 Construction Authorizations	97%	'awareness', 'hipaa', 'throughout'
Management Policy Q389 Helipad Fire	97%	'committee', 'helistops]', 'q'
Management Policy A510 Maintenance Work Orders Updated 063016	97%	'technician]', 'technician', 'satisfactorily', 'switchboard', 'fl', 'physician'
Management Policy A510 Maintenance Work Orders Updated 063016	97%	'technician]', 'technician', 'satisfactorily', 'switchboard', 'fl', 'physician'

Next Steps

1. Using Deep Learning and N-Grams for preserving some semantics
2. Defining Topics from set of dissimilar keywords and relaying those topics back to Published Documents