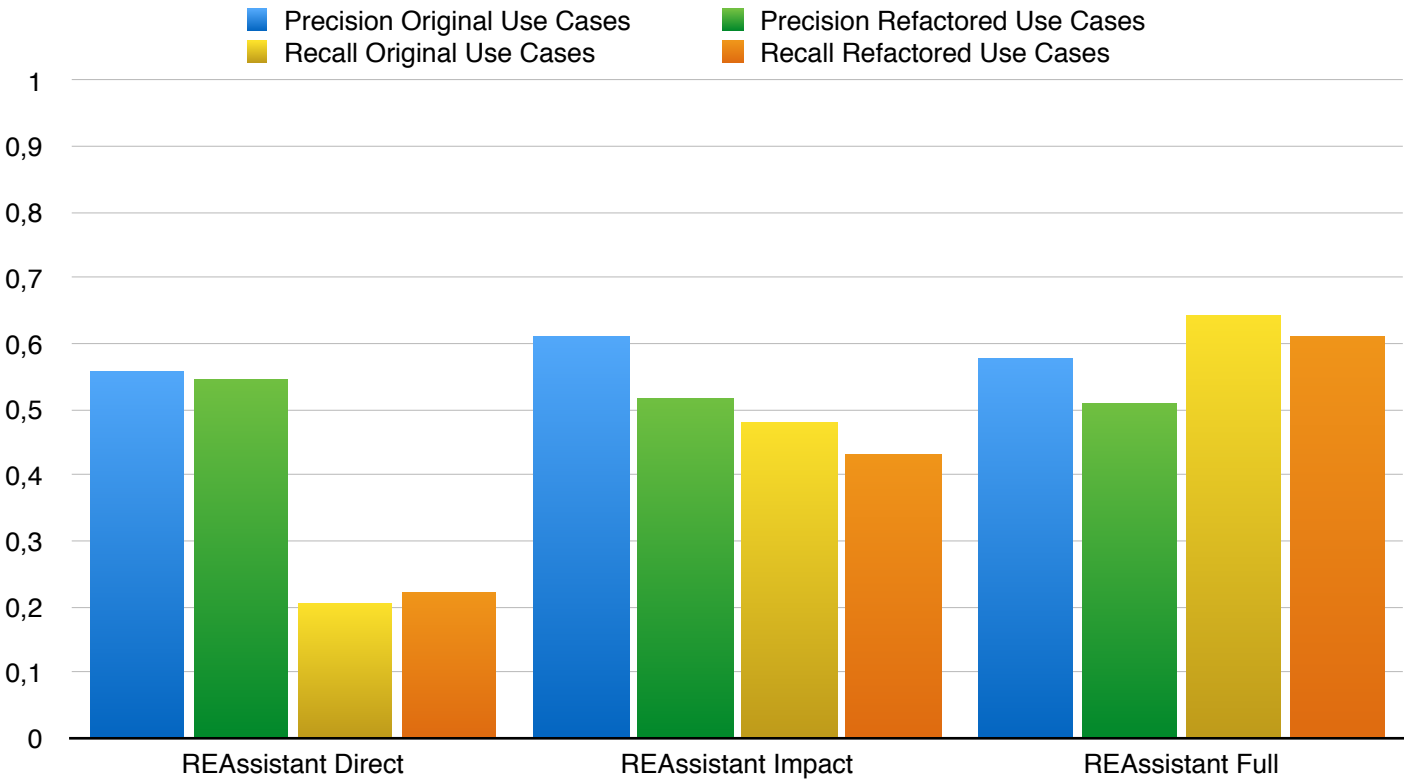


CRS - Impact Analysis of Use Case Refactoring on Latent Concern Detection

Input	Technique	Measure	Value
Refactored Use Cases	reassistant-both	Precision	0,5073529411764706
Refactored Use Cases	reassistant-both	Recall	0,6106194690265486
Refactored Use Cases	reassistant-direct	Precision	0,5434782608695652
Refactored Use Cases	reassistant-direct	Recall	0,22123893805309736
Refactored Use Cases	reassistant-impact	Precision	0,5157894736842106
Refactored Use Cases	reassistant-impact	Recall	0,4336283185840708
Original Use Cases	manualg1	Precision	0,7017543859649122
Original Use Cases	manualg1	Recall	0,22988505747126436
Original Use Cases	manualg16	Precision	0,7721518987341772
Original Use Cases	manualg16	Recall	0,391025641025641
Original Use Cases	eaminer	Precision	0,6071428571428571
Original Use Cases	eaminer	Recall	0,1837837837837838
Original Use Cases	reassistant-direct	Precision	0,5576923076923077
Original Use Cases	reassistant-direct	Recall	0,20279720279720279
Original Use Cases	reassistant-impact	Precision	0,6106194690265486
Original Use Cases	reassistant-impact	Recall	0,4825174825174825
Original Use Cases	reassistant-both	Precision	0,5786163522012578
Original Use Cases	reassistant-both	Recall	0,6433566433566433

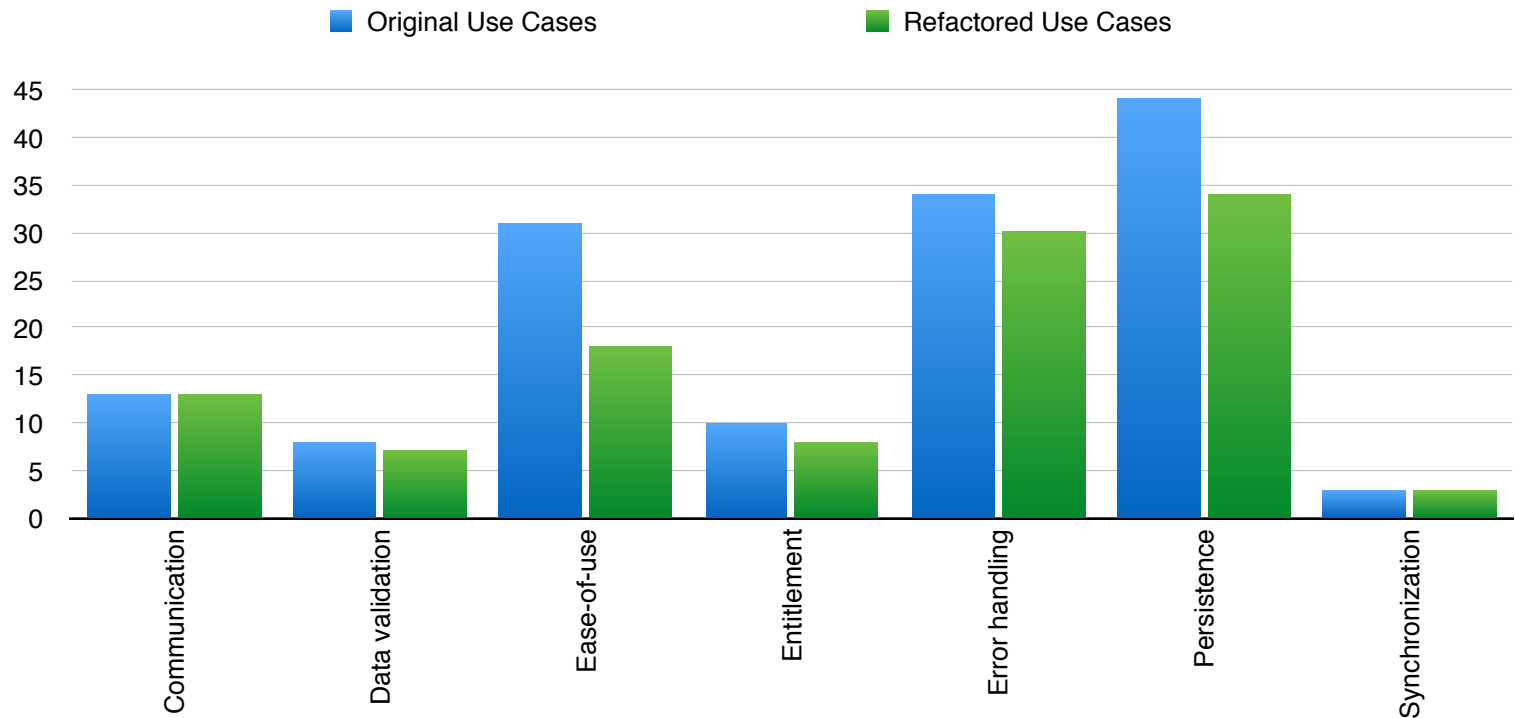
CRS - Impact Analysis of Use Case Refactoring on Latent Concern Detection #2

	Precision	Precision	Recall	Recall
	Original Use Cases	Refactored Use Cases	Original Use Cases	Refactored Use Cases
REAssistant Direct	0,5576923076923077	0,5434782608695652	0,20279720279720279	0,22123893805309736
REAssistant Impact	0,6106194690265486	0,5157894736842106	0,4825174825174825	0,4336283185840708
REAssistant Full	0,5786163522012578	0,5073529411764706	0,6433566433566433	0,6106194690265486



CRS - Distribution Analysis of Latent Concerns

	Communication	Data validation	Ease-of-use	Entitlement	Error handling	Persistence	Synchronization	Total	Porcentual
Original Use Cases	13	8	31	10	34	44	3	143	100%
Refactored Use Cases	13	7	18	8	30	34	3	113	79,02%

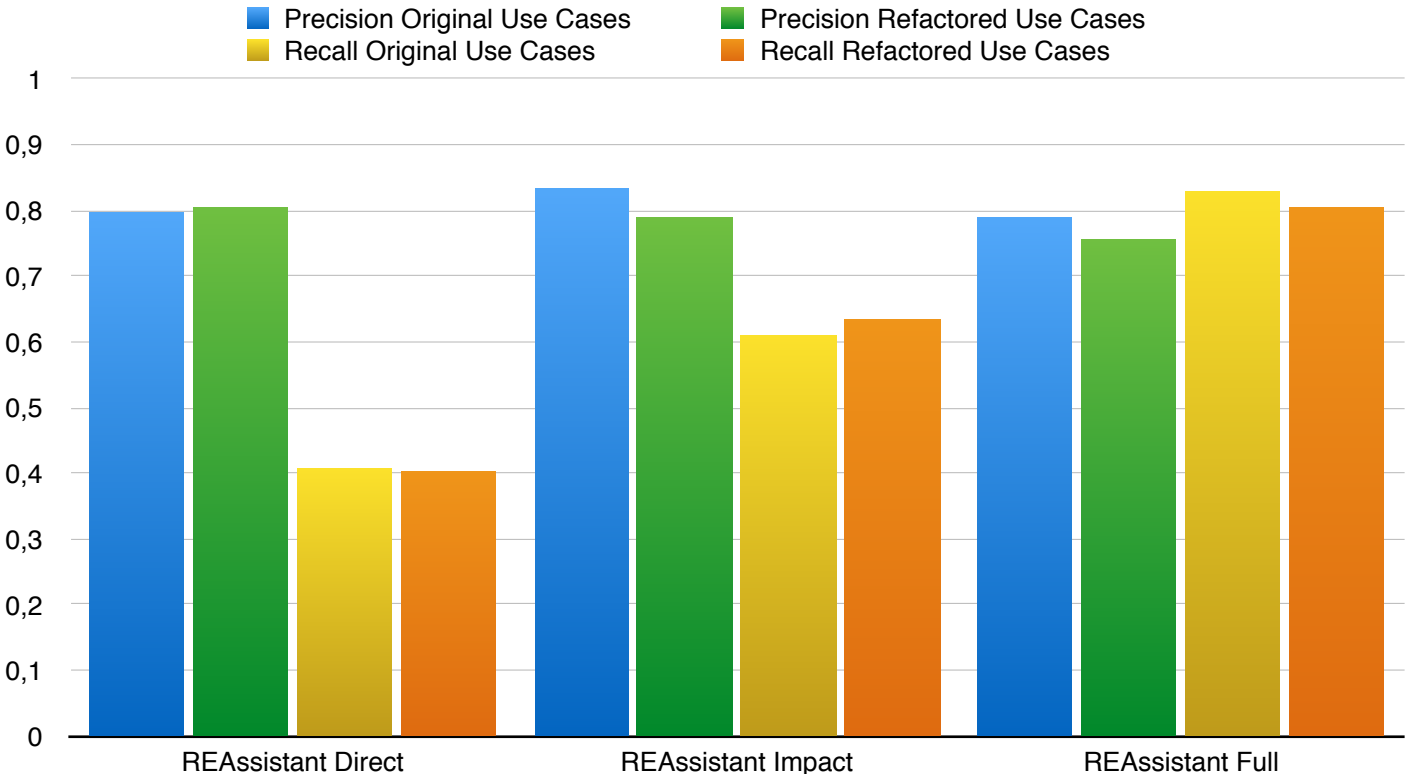


HWS - Impact Analysis of Use Case Refactoring on Latent Concern

Input	Technique	Measure	Value
Refactored Use Cases	reassistant-both	Precision	0,7552447552447552
Refactored Use Cases	reassistant-both	Recall	0,8059701492537313
Refactored Use Cases	reassistant-direct	Precision	0,8059701492537313
Refactored Use Cases	reassistant-direct	Recall	0,40298507462686567
Refactored Use Cases	reassistant-impact	Precision	0,7870370370370371
Refactored Use Cases	reassistant-impact	Recall	0,6343283582089553
Original Use Cases	manualg4	Precision	0,7605633802816901
Original Use Cases	manualg5	Recall	0,5837837837837838
Original Use Cases	manualg5	Precision	0,9620253164556962
Original Use Cases	manualg6	Recall	0,41081081081081083
Original Use Cases	eaminer	Precision	0,6538461538461539
Original Use Cases	eaminer	Recall	0,3022222222222222
Original Use Cases	reassistant-direct	Precision	0,7978723404255319
Original Use Cases	reassistant-direct	Recall	0,40540540540540543
Original Use Cases	reassistant-impact	Precision	0,8308823529411765
Original Use Cases	reassistant-impact	Recall	0,6108108108108108
Original Use Cases	reassistant-both	Precision	0,788659793814433
Original Use Cases	reassistant-both	Recall	0,827027027027027

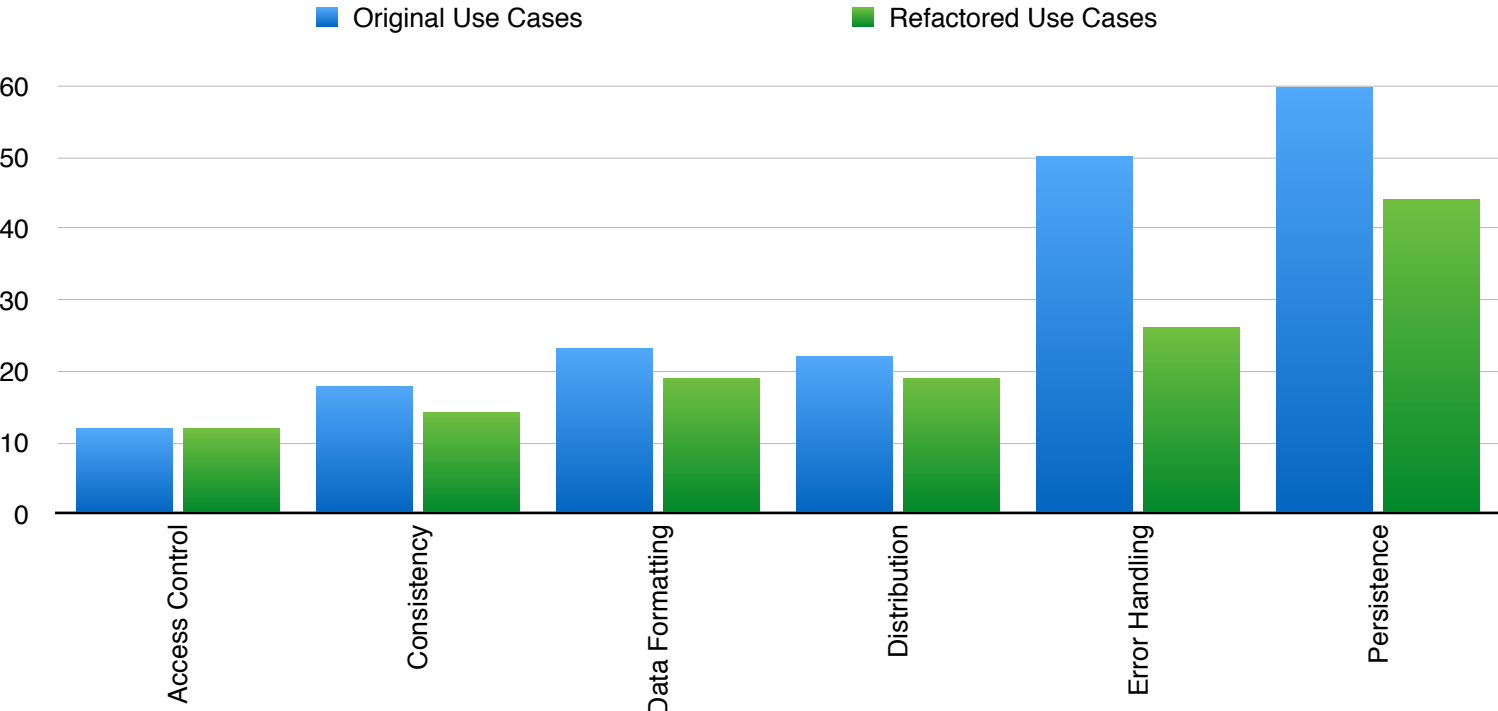
HWS - Impact Analysis of Use Case Refactoring on Latent Concern Detection #2

	Precision	Precision	Recall	Recall
	Original Use Cases	Refactored Use Cases	Original Use Cases	Refactored Use Cases
REAssistant Direct	0,7978723404255319	0,8059701492537313	0,40540540540540543	0,40298507462686567
REAssistant Impact	0,8308823529411765	0,7870370370370371	0,6108108108108108	0,6343283582089553
REAssistant Full	0,788659793814433	0,7552447552447552	0,827027027027027	0,8059701492537313



HWS - Distribution Analysis of Latent Concerns

	Access Control	Consistency	Data Formatting	Distribution	Error Handling	Persistence	Total	Porcentual
Original Use Cases	12	18	23	22	50	60	185	100%
Refactored Use Cases	12	14	19	19	26	44	134	72,43%

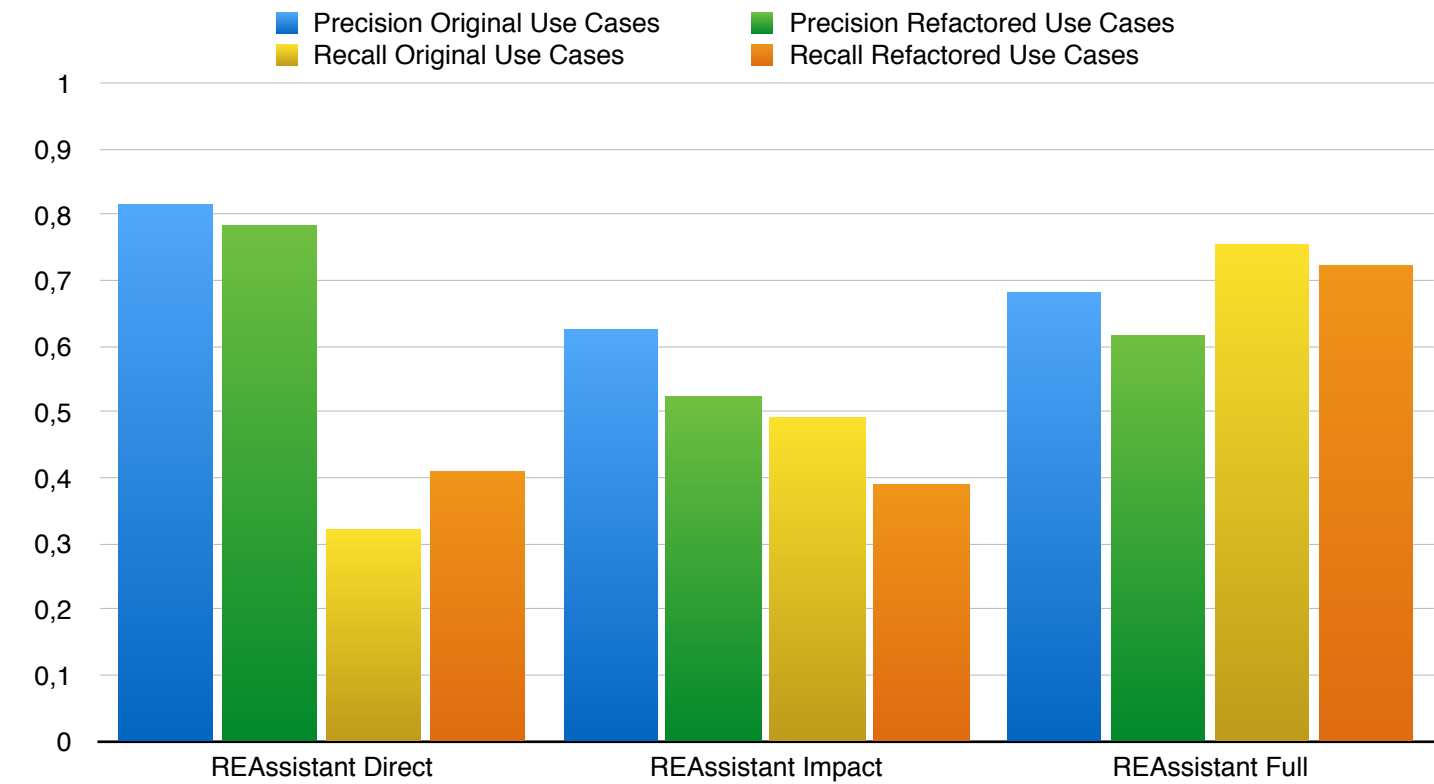


MSLite - Impact Analysis of Use Case Refactoring on Latent Concern

Input	Technique	Measure	Value
Refactored Use Cases	reassistant-both	Precision	0,6150627615062761
Refactored Use Cases	reassistant-both	Recall	0,7241379310344828
Refactored Use Cases	reassistant-direct	Precision	0,7830188679245284
Refactored Use Cases	reassistant-direct	Recall	0,4088669950738916
Refactored Use Cases	reassistant-impact	Precision	0,5231788079470199
Refactored Use Cases	reassistant-impact	Recall	0,3891625615763547
Original Use Cases	manualg-a	Precision	0,9206349206349206
Original Use Cases	manualg-a	Recall	0,13551401869158877
Original Use Cases	manualg-b	Precision	0,678082191780822
Original Use Cases	manualg-b	Recall	0,3626373626373626
Original Use Cases	manualg-c	Precision	0,6025641025641025
Original Use Cases	manualg-c	Recall	0,4828767123287671
Original Use Cases	eaminer	Precision	0,8481012658227848
Original Use Cases	eaminer	Recall	0,19705882352941176
Original Use Cases	reassistant-direct	Precision	0,8148148148148148
Original Use Cases	reassistant-direct	Recall	0,32234432234432236
Original Use Cases	reassistant-impact	Precision	0,6261682242990654
Original Use Cases	reassistant-impact	Recall	0,4908424908424908
Original Use Cases	reassistant-both	Precision	0,6798679867986799
Original Use Cases	reassistant-both	Recall	0,7545787545787546

MSLite - Impact Analysis of Use Case Refactoring on Latent Concern Detection #2

	Precision	Precision	Recall	Recall
	Original Use Cases	Refactored Use Cases	Original Use Cases	Refactored Use Cases
REAssistant Direct	0,8148148148148148	0,7830188679245284	0,32234432234432236	0,4088669950738916
REAssistant Impact	0,6261682242990654	0,5231788079470199	0,4908424908424908	0,3891625615763547
REAssistant Full	0,6798679867986799	0,6150627615062761	0,7545787545787546	0,7241379310344828



MSLite - Distribution Analysis of Latent Concerns

	Concurrency	Error Management	External Interface	Graphic User Interface	Latency	Persistence	Reliability	User Access Rights	Total	Porcentual
Original Use Cases	28	69	11	68	15	29	8	45	273	100%
Refactored Use Cases	11	44	14	27	17	32	11	47	203	74,36%

