Questionnaire for calibrating the integrated probabilistic model for software quality prediction

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Model assessment form

scale: from 1 to 5

Category \ Model		A	B	C	D	E
clarity	1 – structure of the model is very unclear					
	5 – structure of the model is very clear					
complexity	1 – complexity of the model is highly insufficient					
	5 – model is strongly too complex					
coverage	1 – model does not incorporate important issues/areas					
	5 – model covers all important issues/areas					
adequacy for environment	1 – model is highly inadequate for our environment					
	5 – scope of model ideally fits to our environment					
ease of adaptation	1 – model cannot be easily adapted					
	5 – model can be easily adapted					
usefulness	1 – model is useless					
	5 – model seems to be very useful					

ideal model?

Importance of quality features

scale: from 0 to +10 (*not important – very important*)

	priority (importance)
Functional suitability	
Performance efficiency	
Compatibility	
Usability	
Reliability	
Security	
Maintainability	
Transferability	
Effectiveness	
Efficiency	
Satisfaction	
Freedom from risk	
Context coverage	

Relationships between quality features scale: from -5 to +5 (*as a strength of the impact: very strong negative –very strong positive*)

	Functional suitability	**Performance efficiency**	**Compatibility**	**Usability**	**Reliability**	**Security**	**Maintainability**	**Transferability**	**Effectiveness**	**Efficiency**	**Satisfaction**	**Freedom from risk**	**Context coverage**
Functional suitability													
Performance efficiency													
Compatibility													
Usability													
Reliability													
Security													
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Transferability													
Effectiveness													
Efficiency													
Satisfaction													
Freedom from risk													
Context coverage													

Hierarchy of quality features (1/3) scale: from -5 to +5 (*as a strength of the impact: very strong negative –very strong positive*)

Quality feature	Subfeature	strength of impact
Functional suitability	Functional completeness	
	Functional correctness	
	Functional appropriateness	
Performance efficiency	Time behaviour	
	Resource utilisation	
	Capacity	
Compatibility	Co-existence	
	Interoperability	
Usability	Appropriateness recognizability	
	Learnability	
	Operability	
	User error protection	
	User interface aesthetics	
	Accessibility	
Reliability	Maturity	
	Availability	
	Fault tolerance	
	Recoverability	

Hierarchy of quality features (2/3) scale: from -5 to +5 (*as a strength of the impact: very strong negative –very strong positive*)

Quality feature	Subfeature	strength of impact
Security	Confidentiality	
	Integrity	
	Non-repudiation	
	Accountability	
	Authenticity	
Maintainability	Modularity	
	Reusability	
	Analyzability	
	Modifiability	
	Testability	
Transferability	Adaptability	
	Installability	
	Replaceability	

Hierarchy of quality features (2/3) scale: from -5 to +5 (*as a strength of the impact: very strong negative –very strong positive*)

Quality feature	Subfeature	strength of impact
Effectiveness	Effectiveness	
Efficiency	Efficiency	
Satisfaction	Usefulness	
	Trust	
	Pleasure	
	Comfort	
Freedom from risk	Economic risk mitigation	
	Health and safety risk mitigation	
	Environmental risk mitigation	
Context coverage	Context completeness	
	Flexibility	

Strength of impact of development process on quality features scale: from -5 to +5 (*as a strength of the impact: very strong negative –very strong positive*)

	aggregated process quality in specification	**aggregated process quality in development**	**aggregated process quality in testing**		
Functional suitability					
Performance efficiency					
Compatibility					
Usability					
Reliability					
Security					
Maintainability					
Transferability					
Effectiveness					
Efficiency					
Satisfaction					
Freedom from risk					
Context coverage					

Relationships among detailed process factors scale: from -5 to +5 (*as a strength of the impact: very strong negative –very strong positive*)

	aggregated process quality in specification	**aggregated process quality in development**	**aggregated process quality in testing**		
effort					
process quality					
leadership quality					
defined process followed					
team organization					
appropriateness of methods and tools					
people quality					
experience					
skills					
motivation					
education					
process difficulty					
distributed communication					
requirements stability					
stakeholder involvement					

Impact of project factors on quality features scale: values „+" or „–" (is there an impact?)

	architecture	CASE tool usage	deployment platform	UI type	target market	used methodology	project difficulty			
Functional suitability										
Performance efficiency										
Compatibility										
Usability										
Reliability										
Security										
Maintainability										
Transferability										
Effectiveness										
Efficiency										
Satisfaction										
Freedom from risk										
Context coverage										

architecture:..... standalone, client-server, multi-tier, …
CASE tool usage:..... very low – very high
deployment platform:..... PC, Mid-range, Mainframe, Multi, …
UI type:..... textual, window-based, traditional web-based (HTML, JSF), rich web-based (Flash, Silverlight)
target market: ..... inhouse-inhouse, inhouse-external, external-inhouse, external-external
used methodology: ..... waterfall, spiral, RUP, Scrum, custom, …
project difficulty (size, complexity, novelty):..... very low – very high

Strength of impact of project factors on quality features scale: values form -5 to +5 (*as a baseline level for quality feature*)

Project factor: ……										
Functional suitability										
Performance efficiency										
Compatibility										
Usability										
Reliability										
Security										
Maintainability										
Transferability										
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