

Integration Complexity Analysis

- structured approach to calculate complexity of integration and b2b projects
- simple, reliable, and repeatable; person and product independent
- validated and refined in several integration projects

t2b's **Integration Complexity Analysis** is a simple, reliable, and repeatable method to calculate the effort developing new or migrating existing integrations. The method is based on the experience gained from integration projects performed by our EAI consultants. It has been refined and validated during several of our customers' integration projects.

The driving force behind the development of a complexity analysis for integrations was to give our customers a reliable method that allows making better decisions during the early stages of integration projects.

Analyzing the complexity of a single integration or a complete integration project will give you a better understanding of:

- overall complexity of the integration(s) by
 - technology
 - data structures
 - mapping
- cost of realizing by phase
 - specification
 - implementation
 - testing
 - deployment
 - maintenance

Among the elements that need to be rated are:

- transport technology (FTP, X400, SAP-ALE, Web Services, Queues, ...)
- data structures (IDOC, EDI, XML, flatfile)
- mapping complexity (number of fields, number of decodes, number of lookups, ...)

Additional input helps to refine the model:

- reuse of existing elements
- available technical/business know-how
- maturity of technology

Complexity Calculation

Each of the above entered facts will either increase or decrease the overall complexity by adding/subtracting from - or multiplying - the base complexity.

Effort and Cost Calculation

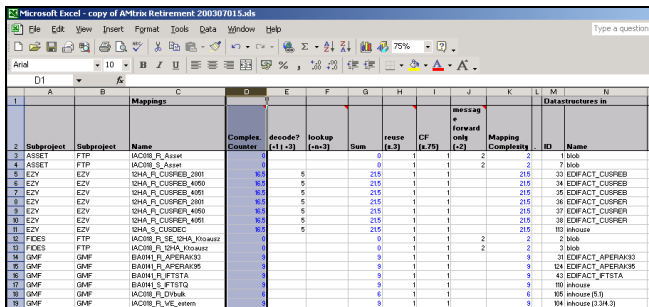
For each phase of the integration development cycle, factors applied to the overall complexity determine the effort and hence the cost.

The model is prepared to handle different hourly rates for the various phases to handle for example off-shore development.

Administration and Customization

All the factors used during the calculation can be adjusted to fine-tune the model depending on the customers own experience.

The preset figures have been determined by performing post implementation reviews where we compared the calculated effort with the actual effort used to implement the integration.

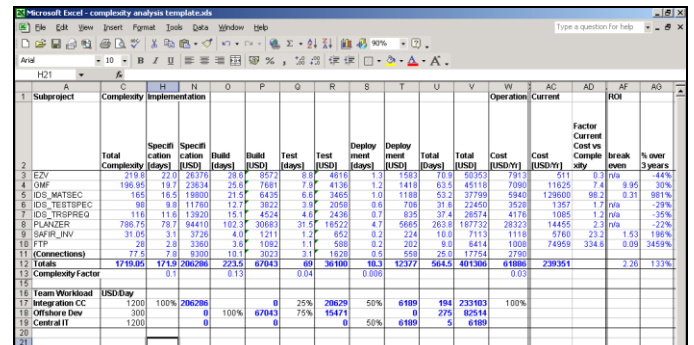


Subproject	Subproject	Name	Complex	decode?	lookup	Sum	reuse	CF	forward	Mapping	ID	Name
ASSET	FTP	ACORR_B_Async	0	0	0	0	0	0	0	0	0	0
ASSET	FTP	ACORR_B_Sync	0	0	0	0	0	0	0	0	0	0
EVZ	EVZ	IDHA_FL_CUSFEB_2005	5	215	0	0	0	0	0	215	30	EDFACT_CUSFEB
EVZ	EVZ	IDHA_FL_CUSFEB_4000	5	215	0	0	0	0	0	215	34	EDFACT_CUSFEB
EVZ	EVZ	IDHA_FL_CUSFEB_4001	5	215	0	0	0	0	0	215	36	EDFACT_CUSFEB
EVZ	EVZ	IDHA_FL_CUSFEB_2001	5	215	0	0	0	0	0	215	38	EDFACT_CUSFEB
EVZ	EVZ	IDHA_FL_CUSFEB_4050	5	215	0	0	0	0	0	215	37	EDFACT_CUSFEB
EVZ	EVZ	IDHA_FL_CUSFEB_4051	5	215	0	0	0	0	0	215	38	EDFACT_CUSFEB
EVZ	EVZ	IDHA_S_CUSDEC	5	215	0	0	0	0	0	215	10	inhouse
FDC03	FTP	ACORR_B_SE_IDHA_Prowant	0	0	0	0	0	0	0	0	0	0
FDC03	FTP	ACORR_FL_IDHA_Knowert	0	0	0	0	0	0	0	0	0	0
GNP	GNP	BA00H_IL_APERAK30	0	0	0	0	0	0	0	0	0	EDFACT_APERAK30
GNP	GNP	BA00H_IL_APERAK05	0	0	0	0	0	0	0	0	0	EDFACT_APERAK05
GNP	GNP	BA00H_IL_FTSTA	0	0	0	0	0	0	0	0	0	EDFACT_FTSTA
GNP	GNP	BA00H_IL_FTST02	0	0	0	0	0	0	0	0	0	inhouse
GNP	GNP	ACORR_FL_IDHA	0	0	0	0	0	0	0	0	0	inhouse (S)
GNP	GNP	ACORR_FL_VL_errort	0	0	0	0	0	0	0	0	0	inhouse (S, J)

Data Entry using MS Excel

Preparation

Before calculating the complexity, all relevant elements of the integration need to be identified and documented. A good place to store and later share this documentation is the EIBB Repository. (please see the EIBB Repository flyer for more details).



Subproject	Complexity	Implementation	Total Complexity	Specif location (days)	Specif location (USD)	Debug (days)	Debug (USD)	Test (days)	Test (USD)	Deploy (days)	Deploy (USD)	Total (days)	Total (USD)	Cost (USD/Y)	Cost (USD/Y)	Factor Current vs Complete	Break even	% user 3 years
EVZ	215	220	26376	29.0	8572	0.8	4616	1.3	1553	76.9	5035	7913	511	0.3	0.0	0.0	44%	
GNP	186	181	23834	25.0	7681	0.9	4196	1.2	1418	63.5	4518	7095	11025	7.4	8.95	39%		
IDG	165	165	19800	21.0	6435	6.6	3465	1.0	1188	53.2	37798	5940	129600	98.2	0.31	981%		
IDG	98	98	11760	12.0	3822	5.8	2958	0.8	788	31.8	22450	3528	1157	1.7	0.0	29%		
IDG	116	116	13920	15.0	4524	4.8	2436	0.7	835	37.4	26574	4178	1085	1.2	0.0	35%		
PLANDER	798	75	84410	182.0	30683	31.5	16322	4.7	5665	263.8	18732	28323	14455	2.3	0.0	22%		
SAP_RJW	310	31	3726	4.0	1211	1.2	652	0.2	224	10.0	713	1118	5760	23.2	1.53	186%		
FTP	28	28	3360	3.0	1082	1.1	588	0.2	202	8.0	6414	1008	74958	334.8	0.09	3459%		
(Connections)	77	78	8700	10.0	2922	1.7	870	0.5	358	26.3	17254	2768						
Totals	1730	1713	206298	223.5	87043	69	36180	10.3	12377	564.5	301360	61880	239351			2.20	133%	
Complexity Factor	0.1	0.13				0.04		0.006										
Team Workload	USD/Day																	
Integration CC	200	100%	200298					25%	20029	50%	6189	194	233903	100%				
Offshore Dev	300						67813	75%	15474				275	82614				
Central IT	1200									50%	6189	5	6189					

Complexity, Cost, and Return on Investment by Subproject