

DRAFT STP Project: Estimation worksheet								
Key Deliverable		Hard \$	BA effort months	DEV effort months	SME effort months	Estimate breakdown	Estimate details	Estimate Assumptions
Design flexible Architecture								
	Design a flexible architecture that more easily allows to integrate: * additional security types/instruments * additional Middleware's * additional SEF's		4	1	1	Analysis and architecture design	Effort scaling: 1BA= (.25DEV; 25SME)	*From an integration perspective, HOOPP will not deal directly with DCM's (and will obtain necessary information from Middleware or other 'data consolidators')
Trade Capture (IRS and CDS)								
	4 BB to SCD interfaces for cleared swaps (IRS and CDS): 2 Transaction and 2 SMF imports		8	4	6	2 SCD imports (IRS and CDS) X 2 (SMF and Transaction)	Based upon past BB to SCD upload experiences 1 instrument (SMF and Transaction uploads) =4BA months; Effort scaling: 1BA= (.5DEV; 75SME) Est. scaled for additional SEF's	*2 import processes (IRS and CDS) *BB trade feed upgrade completed in 2011 (expect this to include all data elements required for swaps) *BB aggregates all SEF transaction into 1 standard transaction record.
	SCD to Bloomberg position refresh and recon		3	1.5	3	1 SCD extract. Translation and formatting. 1 import to BB. 1 extract from BB Build 1 RS recon	Comparable to existing equity refresh & recon process. High IDM involvement Effort scaling: 1 BA= (.5DEV; 15SME)	*Different swap types can be extracted in same extraction. *Current BB recon does not support swap-type instruments.
	Collateral Pledge 'proposed transaction generation' and 'Import' to SCD		3	3	2	Setup of Vendor solution 1 extract from SCD to vendor 1 import into SCD	Comparable to Auto Borrow/Mature Effort scaling: 1BA= (1DEV; 67SME)	* Assumes selected vendors will offer this as an 'out of the box' service that requires minimal effort by HOOPP. The effort has been 'boxed in' to 6 IT effort months (i.e. deliver what can be done in 6 effort months) *All processes can be developed upon data currently available in SCD. There is only 1 data interface from SCD to vendor solution
	Securities lending/borrowing 'proposed transaction generation' and 'Import' to SCD		3	3	2	Setup of Vendor solution 1 extract from SCD to vendor 1 import into SCD	Comparable to Auto Borrow/Mature Effort scaling: 1BA= (1DEV; 67SME)	* Assumes selected vendors will offer this as an 'out of the box' service that requires minimal effort by HOOPP. The effort has been 'boxed in' to 6 IT effort months (i.e. deliver what can be done in 6 effort months) *All processes can be developed upon data currently available in SCD. There is only 1 data interface from SCD to vendor solution
	Additional Bloomberg (BB) costs (additional functionality, licenses, setup/config, training)	-	0	0	0	Extra licenses Extra BB packages	6 additional BB licenses + middle-office package Effort scaling: 1BA= (0DEV; 0SME)	* No additional BB terminals or services are required. * BB will NOT be used for any derivatives clearing processing.
	Setup of (and integration to BB) for other SEFs		1	0	0.5	Testing of integration	Testing mostly. Effort scaling: 1BA= (0DEV; 55SME) Est. scaled for additional SEF's	*Other SEF's will link up with Vcon and vice versa. *SEFs will not charge HOOPP any fees & BB won't charge for such connectivity
	Configure Bloomberg for Transaction Capture for IRS/CDS		0.5	0	0.5	New accounts New counterparties Configure workflow	Based on past experience with BB	*No integration fees/effort for integrating other SEFs * Bloomberg will not charge additional fees to trade in new Swap types
	Allow for setup/capture of new clearing fees (and any subsequent changes: SCD/Pace field setup, GL, PL, etc.)		1	0	0.5	Configure SCD & PACE	Effort scaling: 1BA= (0DEV; 55SME)	*No new GL accounts are required for Transactions fees
	Setup of each SEF					License fees One-time setups Legal counsel involvement	n/a	*Professional services activities will be absorbed by each SEF
Trade Tickets & Blotters (IRS and CDS)								
	Standardized Trade Blotter report		3	2	1.5	RS report Create temporary table storing day's activity.	Effort scaling: 1BA= (.67DEV; 55SME)	* There will only be 2 data sources (SCD & BB) *Blotter displays a minimal set of data elements
	Standardized Trade Ticket/Template		3	1.5	0.5	Design a template(s) format that aligns with SCD trade entry Data transformation processes consumable by SCD (if external data)	Effort scaling: 1BA= (.5DEV; 25SME)	* Trade Ticket templates are not uploaded to SCD * Data is available in a consistent format so it can be easily translated into the HOOPP template
Middleware & Clearing (IRS and CDS)								

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Near time Transaction Import from SCD to Middleware		5	0	2	2 SCD extracts (IRS and CDS) for Middleware's Data mapping/translation from SCD to middleware Logic to account for trade modifications and near time transmission	Effort scaling: 1BA=(0DEV;.5SME)	* Middleware will do 'auto' match/affirm *Assumes SCD has the data content/structure required by Middleware *Assumes SMF details already exist in Middleware and is referenceable from the SCD data attributes (Sec ID, Transaction Code, etc.)
Import 'cleared transaction reference/ids' from Middleware to SCD		2	1	2	2 (IRS & CDS) reformats to SCD structure 2 SCD DFS to import 'cleared transaction reference'	Data integrity checks required. Effort scaling: 1BA= (.5DEV;1SME) Est. scaled for additional Middleware	*Reference ID's (SMF, Trade ID) are referenceable from Middleware to SCD
Changes to SCD transaction status flow or aux jobs		3	0	2	Create new statuses. Integration with existing flow.	Effort scaling: 1BA=(0DEV;.67SME) Testing heavy	*Only 2 new aux. statuses required: Affirmed & Cleared. *No changes required to current Main Status Flow
Configure SCD: additional transaction & instrument free codes (DCM id, CCP id, external reference ids/#'s)		1	0	0.5	SCD configuration	Effort scaling: 1BA=(0DEV;.5SME)	*New fields required are natively supported in SCD *New reference data is not required to be uploaded to Pace
Setup Middleware (license cost, setup/configure, training)	40,000	1	0	0.5	Annual license One-time setup fee Prof. serv. Fees (TBD)	Effort scaling: 1BA=(0DEV;.5SME)	*Auto match and other Middleware services setup are included in the quoted Middleware fee
Setup of each DCM	-				License fees One-time setups Legal counsel involvement	n/a	*Professional services activities will be absorbed by each DCM. *CCP fees and integration will be covered by DCMs.
One time 'Backload' of legacy deals from SCD to Middleware (to Trade repository)		1	0	0.5	SCD extract	Effort scaling: 1BA=(0DEV;.5SME)	* Data structure/content of legacy deals is sufficient for Middleware (i.e. special cross referencing required)
Market/Reference data requirements (IRS and CDS)							
Setup 2 new price sources on SCD		0.1	0	0	Setup 2 Price Sources	Effort scaling: 1BA=(0Dev;0SME) Est. scaled for additional DCMs	Prices will be received from a 1 to 2 'data consolidator' (i.e. Middleware or BB) and NOT received directly from each DCM/CCP
Setup 2 new FX sources on SCD		0.1	0	0	Setup 2 FX Sources	Effort scaling: 1BA=(0Dev;0SME)	FX rates will be received from a 1 to 2 'data consolidator' (i.e. Middleware or BB) and NOT received directly from each DCM/CCP
Import Prices from 'data consolidator' to Pace to SCD		2	1	2	Receive 2 price files; build 2 uploaders to Pace; build 2 extract from Pace; build 2 imports to SCD	Effort scaling: 1BA= (.5DEV;1SME) High IDM involvement	External SCD security ID is automatically referenceable to the SCD security ID. There will be no charges for pricing data
Import FX rates from 'data consolidator' to Pace to SCD		1	0.5	1	Receive 2 FX files; build 2 uploaders to Pace; build 2 extract from Pace; build 2 imports to SCD	Effort scaling: 1BA= (.5DEV;1SME) High IDM involvement	There will be no charges for fx data
Configure SCD MTM pricing hierarchy to use 'data consolidator' price source first		1	0	1	Configure 2 new price sources	Configuration light, testing heavy. Effort scaling: 1BA= (.5Dev;.5SME)	*MTM view uses 'data consolidator' prices (new HOOPP standard for MTM valuation) * IM view continues to use HOOPP/FinCad pricing.
Market Data Standardization& data Integrity		3.5	2	2	RS report	* Standardizing Cleared Security ID's * Inclusion of Cleared Security ID's into Pace SSM logic * 2 SMF data integrity reports Effort scaling: 1BA= (.4Dev;.6 SME)	*Non-HOOPP side of check has appropriate data and references to enable checking * There will be no charges for any additional market data
Integration of new Legal Entity ID (issuer/parents)		1.5	0.5	0.75	Setup new Entity scheme Impact analysis and (if req) Modify existing compliance reports	* Setup of new legal ID * Inclusion of new legal ID into compliance extract Effort scaling: 1BA= (.3DEV;.5SME)	* New Legal entity ID required (in addition to existing scheme) * Only needs to be included into Compliance Extract (and no other reports)
Setup of DCM and CCP Codes		0.1	0	0.1	Setup of new Party Codes	Effort scaling: 1BA=(0DEV;1SME)	* DCM and CCP codes can be natively supported on SCD
Pricing usage re-configuration		2	0	1	Modify pricing usage	Effort scaling: 1BA=(0DEV;.5SME)	* TBD if this is required - there may be a need to at times utilize HOOPP FinCad prices (vs. external DCM prices) * Assumption is that there are only a few and clear rules for these exceptions
Variation Margin (VM) Processing (IRS and CDS)							

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Configure SCD to calculate and post daily VM (using 'data consolidator' prices and FX rates)		4	1	4	Calculate HOOPP's version of expected variation margin call using SCD calculation engine and PFC's. Extract the results using Data Extractor (to file or table) Create 'Cash' Transactions (with VM freecodes and specific cash accounts) Import Cash VM transactions into SCD	Effort scaling: 1BA=(-.25DEV; 1SME)	*Solution will use an SCD (4.8) workaround, requiring SimCorp consulting costs *Cash collateral/VM is manually entered via GCM *Integrated SCD VM solution not available until v5.1 or later * Raw PFC/DEX data (for VM transaction calculation) will not be saved in a Database for audit/historical purposes * Corrections that result in changes to historical VM transactions will be 'caught-up' on today's date (i.e. no changes to historical transactions) *End of day Variation Margin calculations will be sufficient (and not intraday) * VM is posted at the Model Portfolio position/deal level
Recon SCD VM to DCM VM		1	0	1	SCD VM extract sent to Middleware	Effort scaling: 1BA=(0DEV; 1SME)	* VM recon is done by Middleware or by DCM (with HOOPP VM received by Middleware) * If VM recon service is not available, VM recon will be done manually by HOOPP
Shadow replication processing (for reporting)		3	2	2	Create Shadow Portfolio & mirror postings to shadows AM/PL reporting - data source to now be picked up from Shadow Portfolio	Effort scaling: 1BA=(-.6DEV; 6SME)	
FX flattening (per DCM)		2	0	1		Effort scaling: 1BA=(0DEV; 5SME)	
SCD Accounting configurations for VM		1	0	0.5	New Chart of accounts FAP/FAM configuration GL posting rules/finance schemes configuration Add new accounts to port. figs.	Effort scaling: 1BA=(0DEV; 5SME)	
SCD to NT Cash Recon: adjustments for VM Netting		1	1	0.5	Enhance/redesign cash recon.	Effort scaling: 1BA=(1DEV; 5SME)	*Existing HOOPP cash recon to be enhanced to allow for recon of netted VM *Data detail/granularity necessary for rollup (from detail) is available from external sources * External roll-up data will now be stored in Pace/SCD
Revise collateral process to deliver initial margin on T+1		1	0	0.5	Reconfigure SCD collateral mgr to propose eligible collateral	Effort scaling: 1BA=(0DEV; 5SME)	*SCD 4.8 can natively handle this requirement through configuration and testing.
Setup collateral pools and haircuts for each DCM		0	0	0.2	Configure 2 - 4 pools & haircuts		*SCD 4.8 can natively handle this requirement through configuration
Modification of existing reports due to introduction of VM/DCM changes		1.2	0.6	0.6	RS/PA report changes/development	1 week/report. Effort scaling: 1BA=(-.5DEV; 5SME)	* 5 New reports required because of new DCM role * Data for report is natively available in SCD or Pace
Recon's (IRS and CDS)							
HOOPP to Markit Position Recon		1	0.5	0.5	1 SCD position extract. Translation required to Markit file format Setup Markit for recon processing	Effort scaling: 1BA=(-.5DEV; 5SME)	*Markit provides position reconcile facility/service * Markit can perform recon with 1 SCD position extract (with native SCD data attributes) * No HOOPP in-house recon development required
Data Integrity Reports (IRS and CDS)							
Trade flow data integrity		2.5	1.25	1.25	RS report	5 RS reports (1wk per report) Effort scaling: 1BA=(-.5DEV; 5SME)	*Non-HOOPP side of check has appropriate data and references to enable checking.
Price feed data integrity		0.5	0.25	0.25	RS report	2 based on 2 'data consolidators' Effort scaling: 1BA=(-.5DEV; 5SME)	*Non-HOOPP side of check has appropriate data and references to enable checking.
FX feed data integrity		0.5	0.25	0.25	RS report	2 - 4 based on DCM Effort scaling: 1BA=(-.5DEV; 5SME)	*Non-HOOPP side of check has appropriate data and references to enable checking.
IT infrastructure config/dev: FTP, batch jobs and scheduling		3	3		Setup all jobs re: FTP, batch jobs and scheduling	Effort scaling: 1BA=(1DEV; 0SME)	
Operational procedure/process change training/documentation		0	0	3	Setup all jobs re: FTP, batch jobs and scheduling	Effort scaling: 0.0BA=(0.0DEV; 3SME)	
Re-testing on a newly upgraded 5.1 environment (est. Summer 2012)		2	0	2	Move configurations from a 4.8 to a 5.1 environment Re-test completed items to ensure compatibility with new version		
Sub Total (Hard\$ and gross effort months: BA, Dev, SME)	40,000	78	31	50			
FTE headcount equivalent (gross):		6.5	2.6	4.2			

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80% effective utilization rate (to account for vacations, holidays, admin overhead, etc.)		97	39	63			
FTE headcount equivalent (net):		8.1	3.2	5.3			
Note: No Project contingency applied, this will be applied at the ISG level							
External (consultant) resource head count							
Contract BA (based upon 25% of total BA FTE total)	2.0		435	TBD			
Contract Developer (based upon 25% of total DEV FTE total)	0.8		490	TBD			
Contract SME (based upon 50% of total SME FTE total)	1.75		160571.43				
SimCorp Consultant	0.75		0				*Most of SC resource requirements will covered by the IT ISG operating budget *There will be no to minimal SC resource needs for all non STP work
IT Project Manager	1.0						* IT PM will be covered by the full time IT PM that currently exists
Business Project Manager	1.0		300				
Sub Total: External headcount	7.3		161796.4				
Hard\$ for specialist consulting							
Industry specialist consulting	250,000						
3rd party vendor consulting (i.e. SC, BB, Markit, DCM, etc)	250,000						
Legal Counsel	100,000						Legal will allocate .55 of a resource (internal cost)
Investment Mgmt	-						Investment Mgmt will allocate .6 of a resource (internal cost)
Sub Total (Hard\$ for external consultants)	600,000						
Other possible costs							
Messaging infrastructure improvement	-				Evaluate/use new methods/tools for data movements		*Will evaluate if new message tool is required to support the messaging needs (this will NOT retrofit any existing messaging jobs) * It is not determinable what this may be at this time
New SimCorp module purchases required to support STP initiative	0						*There are no known modules that are required to be purchased. This is a placeholder only, in the event HOOPP is required to purchase such a module *ISG steady state budget includes 200k for new SC modules, which may be used for any new functionality required to be purchased
Grand Sub Total: Total Hard \$	640,000				Note: External consulting resource costs not factored in		
Management Contingency - To be estimated later	-						
Grand Total	640,000				Note: External consulting resource costs not factored in		
Overall Assumptions							
* This estimate only includes regulated/cleared swaps (IRS and CDS Instruments). All other instruments are out of scope for 2012, and are considerations for 2013							
* This estimate assumes: 1 Middleware, Bloomberg as Trade Execution Hub (BB consolidates various SEF's), multiple DCM's and multiple CCP's (the solution design will be DCM and CCP agnostic)							
* Top priority is given to the minimum requirements to satisfy the 2012 Regulatory Framework (some non critical items may be deferred to 2013)							
* No additional Bloomberg features/licenses are required; Bloomberg will not be required for any derivatives clearing needs							
*Estimation is for budget purposes only - detailed project planning will determine exact timelines and costs (which may be more than 1 year in duration)							
* Solution build will start in Jan 2012 (otherwise there is risk in completing all deliverables by Dec 2012)							
* DCM's, CCP's, SEF's and Middleware will all be evaluated and preferred vendors identified by Dec 31, 2011							
* High level architecture will be defined by Dec 31, 2011							
* Estimate assumes 1 Middleware and no direct integration from HOOPP to DCM's							

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* HOOPP will use external prices for MTM/validation purposes (and Fincad pricing will still be calculated)								
* Security Analytics (i.e. yield/durations) will continue to be calculated based upon the existing source/methodology								
* There will be NO conversion of historical deals/positions/SMFs (i.e. legacy deals are grandfathered from this process)								
* SimCorp and Pace are able to 'natively' support 'new configuration/data' requirements with the version's in place at start of Project (SCD version will be 4.8).								
* No new SCD holdings keys required (current collateral pool holding key will suffice)								
* There will be sufficient Free Codes available in SCD to support data requirements								
* No material changes to Pace & PL Data mart will be required (data structures, DSM, PPDA, uploaders, etc)								
* No changes to existing key reports (i.e. Asset Mix, Currency Hedge, Short Hedge, etc.)								
* STP solution will not negatively impact overnight batch processing window								
* No changes to current security type and portfolio/investment structures will be required								
* In alignment with 2012 guiding principles, the option is to 'keep it simple': Broad-level technology solutions (Charles River, Blackrock Aladdin, Murex, Calypso, etc) are not options for the Trade Capture								
* HOOPP's design philosophy favors buy (vendor solution) versus build (HOOPP custom build)								
* All new vendor solutions are ASP solutions (housed at Vendor sites) and that there is no in-house servers, installation or maintenance anticipated								
* Internal HOOPP Legal counsel will be required to review and finalize all legal agreements. This effort will likely occur late 2011 to early 2012								
* No recon is required between HOOPP calculated prices to DCM received prices								
* There are no impacts to SSI								
* Estimation assumes that some contract resources and expertise will be required								
* Finance SME's may do some 'proxy' testing for Investment Management								
* Investment Management will provide allocations of various Portfolio Mangers/Traders (to provide requirements, walkthroughs, validations, etc.)								
* Estimates assumes there will be minimal impacts and re-testing due to the SCD 5.1 upgrade and new functionality implementation								
* No new SCD functionality will be implanted (from other projects) that materially impacts the STP project								
* There will not be a new (3rd) pricing profile or major changes to the current 2 pricing profiles								
* There will be no or minimal Audit impact to STP Project resources, effort or timelines								
Confidence Level								
Due to the evolving landscape (vendor offerings, final rules), the confidence level of this estimate is low								