

L2 Review Findings

16 January 2019

Review Team

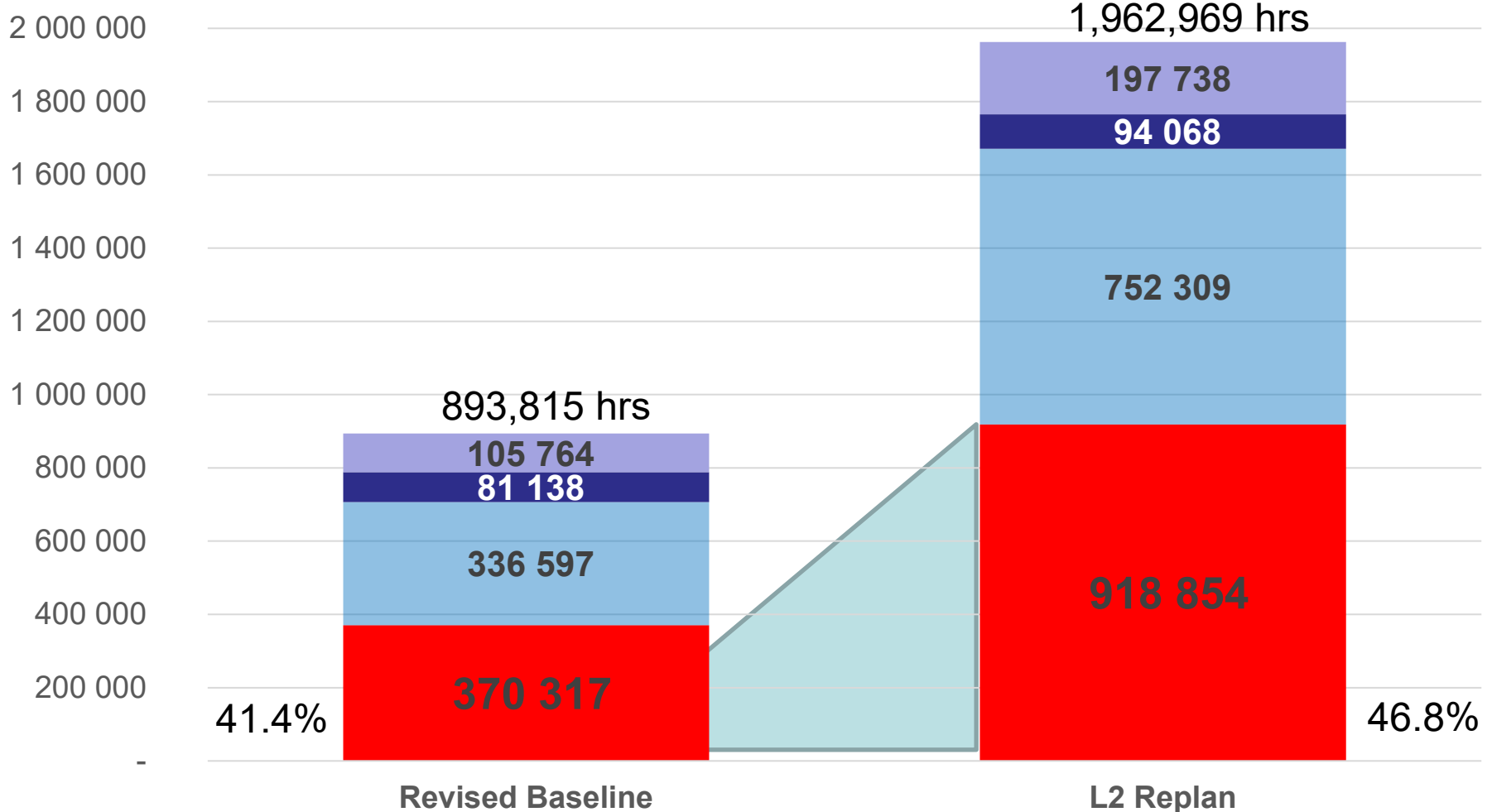
- Per Winge (26), Eric Ho (25), Piyush Verma (20)
- SAP Tiger team & IBM Services SAP large complex delivery
- Role:
 - To review and assess the current estimates of L2
 - To drive the IBM review and approval process
- Started working with SAP in 1992
- Tiger Team interacts with over a hundred projects a year
- Standard estimating models and metrics plus deep delivery expertise
- 100% of SAP projects estimates in IBM require approval of Tiger team

Objectives

- Share current observations regarding L2 estimates and timeline
- Agree on next appropriate actions

	Build & Test (Lot 10 & 11)			
	Efforts			
	After	Before		Time factor (8 months)
Functional	627 308	183 930	341%	306 550
Technology	627 027	191 268	328%	318 780
OCM	85 063	39 373	216%	65 622
Management, Integration and QA	136 661	60 855	225%	101 425
	1 476 059	475 426	310%	792 377
	After	Before		Gap
Delta on planning	1 476 059	475 426		1 000 633
Delta extension on baseline effort	792 377	475 426		316 951
Delta to explain				683 682
Additional scope (Letters, ACT, ...)				160 000
Remaining delta				523 682

Revised Baseline vs. L2 Replan



- Assistance à la gestion, bureau de programme et intégration et assurance-qualité
- Gestion du changement
- Intégration technologique
- Intégration fonctionnelle

2.5x increase
in Functional
hours

Findings

- Team composition
 - Ratio of functional efforts
 - Increased from 34% (Initial Baseline) to 41% (Revised Baseline) to 47% (L2 VF) for efforts (918 854 hours)
 - From 34% of 876 627 to 47% of 1 962 969 hours
 - Business Analysts project involvement stays high throughout the project
 - Onsite vs. Nearshore/Offshore:
 - Normally 28% onsite, vs 45% revised baseline vs 52% L2 VF
 - Churn factor impacts delivery model

Key findings on estimates

- Average of 79 hours to write a Functional specification vs 28 hours (IBM standard metric)
- Average of 39 hours to perform one Unit test by Functional team vs 16 hours (IBM SME metric)
- Ratio of Functional specification efforts over Application development efforts

	Functional Specs	Unit Tests	Ratio Dev vs Functional
IBM Metric	28	16	215 372
L2 plan	79	39	627 309
	282%	244%	291%

Functional specifications overrun

- Current L2 plan
 - 1 807 gaps, with average 51 hours / Functional spec
 - Result in 1 169 Functional specs with average of 79 hours / Functional spec
 - vs IBM average number of 28 hours / Functional spec
 - 51 hours of additional capacity / Functional spec
 - $51 \times 1\,169 = 59\,619$ additional hours
 - As Functional team is 50% of total capacity, potential savings are:
 - $2 \times 59\,619 = \mathbf{119\,238 \text{ hours}}$

Unit tests by Functional team overrun

- Current L2 plan
 - 1 807 gaps, with average 25 hours / gap
 - Result in 1 169 Functional specs with average of 39 hours / unit test spec
 - Vs IBM average number of 16 hours / unit test
 - 23 hours of additional capacity / unit test
 - $23 \times 1\,169 = 18\,120$ additional hours
 - As Functional team is 50% of total capacity, potential savings are:
 - $2 \times 18\,120 =$ **36 240 hours**

Ratio of Functional specification efforts over Application development efforts

- 387 688 hours of Development time
- According to IBM Metric, 107 686 hours of Functional specifications required
- As Functional team is 50% of total capacity, total Functional efforts should be 215 372 hours
- Current efforts planned for Functional are 627 309 hours
- Potential savings are:

$$\square 627\,309 - 215\,372 = \mathbf{411\,937 \text{ hours}}$$

Still being analyzed

- Potential to optimize the # of module experts (PM, SD) by reviewing utilization in CSV vs CSP
 - Working with same limited set of SAP functional objects
 - Opportunity to share vs. increasing chapter size
- What is in the 20% unproductive time?
 - Any overlap with other non-project time?
 - Other?

Findings on WRICEFS

- WRICEF complexity calibration

	Very high	High	Medium	Simple	Very Simple
Original	5%	20%	55%	15%	5%
Replan	14%	22%	44%	19%	2%

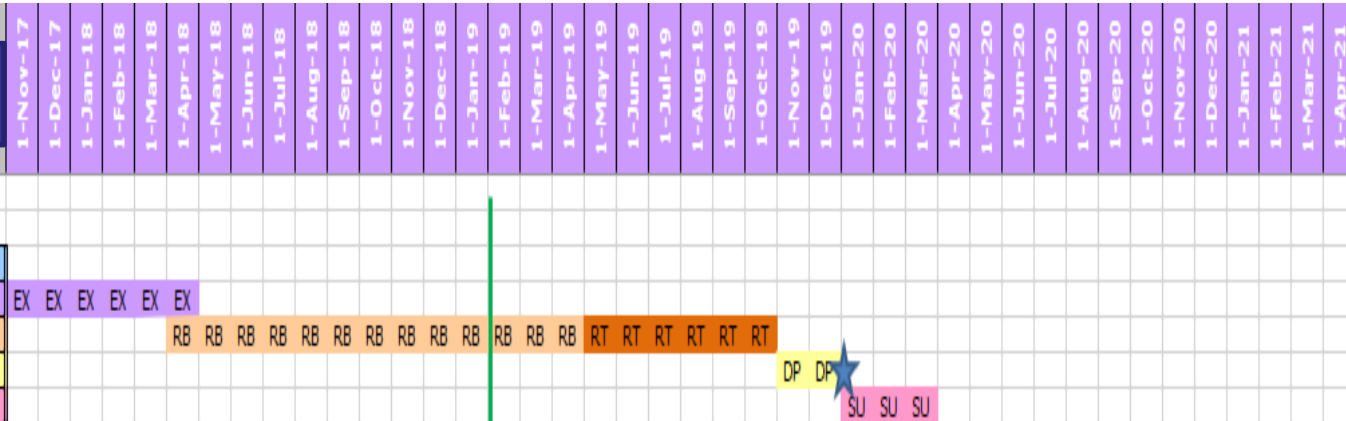
- Increase in # of WRICEFs
 - From 979 (742 + 237 conversions) to 1,306 (1169 + 137 conversions)
- Number of WRI_E_'s per month (95) higher than maximum recommended (60 to 80)

Timeline Assessment

L2 Original Plan

SAP Release 2 - Original Plan

Project Prep
Explore
Realize and Test
Deploy
Hypercare/Sustain

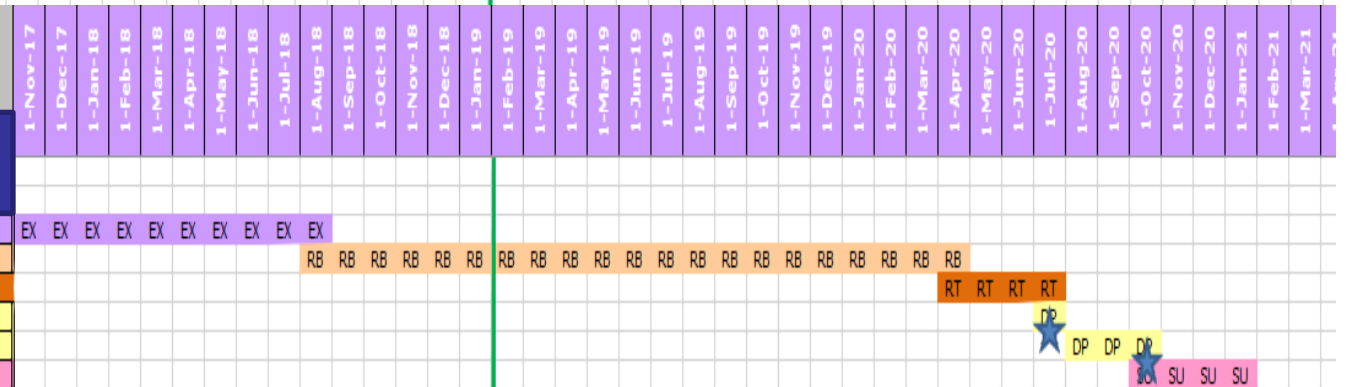


Implementation Timeline

L2 Re-Plan

Small Pilot Go-live 7/13/2020
Business Go-Live 10/12/2020

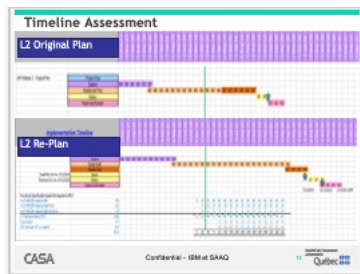
Explore
Realize Build
Realize Test
Deploy
Deploy
Hypercare/Sustain



7/13/2020 10/12/2020 1/15/2021 EOP

Functional Specification based Development effort

# of WRICEF objects IBM	770	5	10	30	50	60	60	60	60	60	60	60	60	60	60	60	56	45	34
# of WRICEF objects OpenText	332	5	15	17	20	25	25	25	25	25	25	25	25	25	25	25	25	25	25
# of WRICEF objects DigiCommerce	67	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	4	4	4
# Total (excluding CST)	1169	5	19	49	71	84	89	90	90	90	90	90	90	90	90	90	85	74	63
Conversion	137					5	12	12	12	12	12	12	12	12	12	12	12	12	12
CST (not part of L2 replan)	507							42	42	42	42	42	42	42	42	42	42	42	45
	1813	5	19	49	71	131	143	144	144	144	144	144	144	144	144	144	139	128	120



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Other actions underway

- Effort/Team size questions
 - OCM Team size vs # of users / locations
 - End user training vs # users / locations
 - Tech team size (infrastructure, security, basis) vs # of environments
- Finalize reviews and approvals process within IBM
- Approach to re-engage with relevant teams