

Hyperion Focus 16

Mondi's journey through HFM 11.1.2.4 upgrade

Milagros Sanchez

Mondi Group



Mondi's journey through HFM 11.1.2.4 upgrade

Hyperion Focus '16

Oct 19th 2016

Agenda

- Who is Mondi?
- Ecosystem before the upgrade
- Reasons for the upgrade
- Project-Preparation
- Challenges
- Ecosystem after the upgrade
- Project summary / time plan 1
- Project summary / time plan 2
- Archive environment
- DR environment
- Lessons learned



Overview of Mondi-Group

Hyperion Focus '16



Mondi at a glance

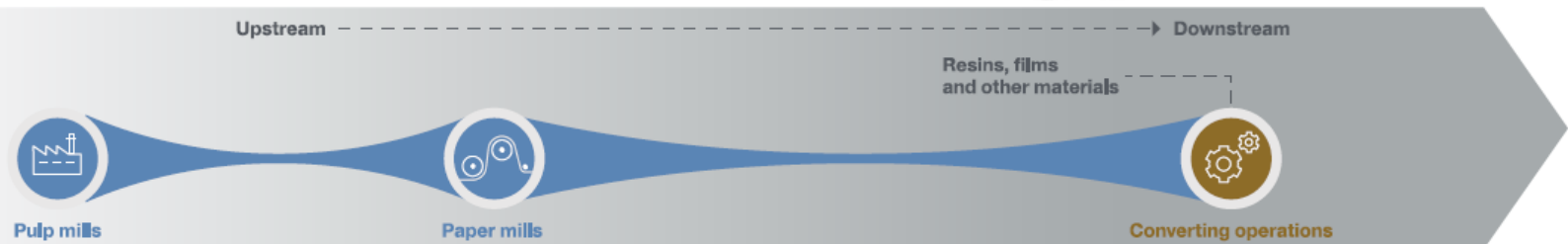


- 25,000 employees
- Over 100 **operations** located in more than 30 countries
- Corporate offices in Johannesburg, London and Vienna
- Primary listing in [Johannesburg](#) and Premium listing in [London](#)

Locations

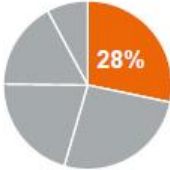


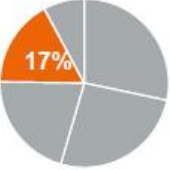
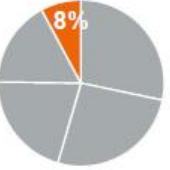







Business Model



Business Units overview



	Packaging Paper	Fibre Packaging	Consumer Packaging	Uncoated Fine Paper	South Africa
H1 2016 Revenue ¹ & ROCE	€1,045m  23.5%	€968m  12.6%	€765m  11.6%	€625m  30.3%	€290m  37.4%
Products					
Market positions	Europe	#1 Kraft paper #2 Virgin containerboard	#1 Industrial bags ² #1 Uncoated fine paper	#1 Commercial release liner #2 Extrusion coatings	South Africa
	Emerging Europe	#1 Containerboard	#3 Corrugated packaging		#1 BHKP #1 White-top kraftliner #1 Uncoated fine paper

IN TOUCH EVERY DAY

Our products touch the lives of millions, every day.





HFM Upgrade from 11.2.1 to 11.1.2.4

Ecosystem before the upgrade



EPM Products

- We use HFM, FDQM, HSF, smart view
- Around 450 HFM users, 110 FDQM users and 3 HSF users
- We have 3 HFM applications
 - FIN application
 - used for regulatory and management reporting.
 - We also use it for Outlooks and Plan year reporting
 - We have around 450 users using this application
 - SIM application
 - Used for regulatory and management of Sustainability and Health reporting
 - We have around 250 users
 - Monthly reporting

Ecosystem before the upgrade



EPM Products

- CAPEX application
 - Used only for internal CAPEX reporting
 - Outlooks and Plan Year data are also required in this application
 - Around 450 users (same users from FIN application).

Ecosystem before the upgrade



FDQM

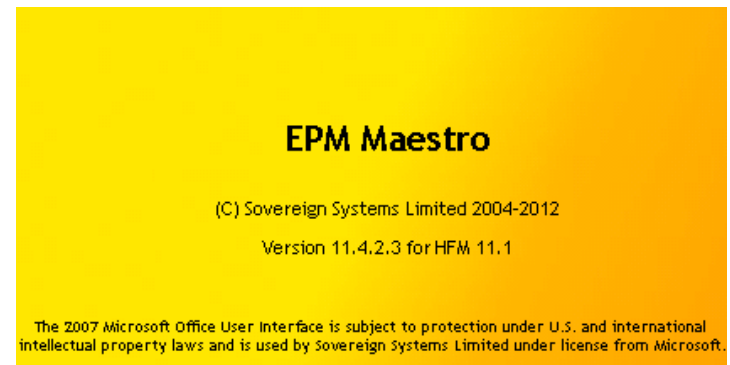
- Interface between SAP ERP systems and FIN application.
- We use it for Actual reporting for more than 100 entities around the group
- We also use it to transfer data from FIN to SIM application: for example:
 - Production volumes – to calculate different emission factors
 - Wood prices and consumption – for Wood reporting
 - Hours worked – for calculation of different LTI (Lost Time injuries)
 - Number of employees / contractors – for GRI / Integrated reporting

Ecosystem before the upgrade



Peripherals

- Internet Explorer 9
- Office 2007 in Vienna HQ
- Office 2010 and higher in other locations
- Smart View
- Merlin XL Version 1
- EPM Maestro 11.4.2.3



Ecosystem before the upgrade



Resources

- Mondri HFM team
 - Application: 4 people
 - Infrastructure: 2 people
- Maintenance of the applications
 - FIN – Outsourced to Amosca
 - SIM and CAPEX maintained internally
- Maintenance of Infrastructure is outsourced to Infratectects

Ecosystem before the upgrade

HFM - Infrastructure

- Development – monolithic Server
 - Windows Server 2008
 - SQL Server 2008
 - HFM 11.1.2.1
 - 40 CPUs/80 vCPUs
 - 256 GB Memory

- Production – monolithic mirrored Server
 - Windows Server 2008
 - SQL Server 2008
 - HFM 11.1.2.1
 - 8 CPUs/16 vCPUs
 - 128 GB Memory

Systems to be migrated

Vienna



Production



Standby



Development

Amsterdam



DR



Archive

Reasons for the Upgrade

- Hardware life was ending in May 2015
- Mondy's HFM Version is 11.1.2.1
- Newer Versions cannot run on the current Hardware
- HFM 11.1.2.1 does not support newer Internet Explorer versions, leading to
 - problems around the world with newer browsers
 - security issues, because compatible Internet Explorer 9 is out of support by Jan 2016
 - outdated
- Three options available
 1. Same HFM Version (11.1.2.1) with new Hardware
 2. Upgrade to HFM Version 11.1.2.3 with new Hardware
 3. Upgrade to HFM Version 11.1.2.4 with new Hardware

Reasons for the Upgrade

Considerations

Option 3

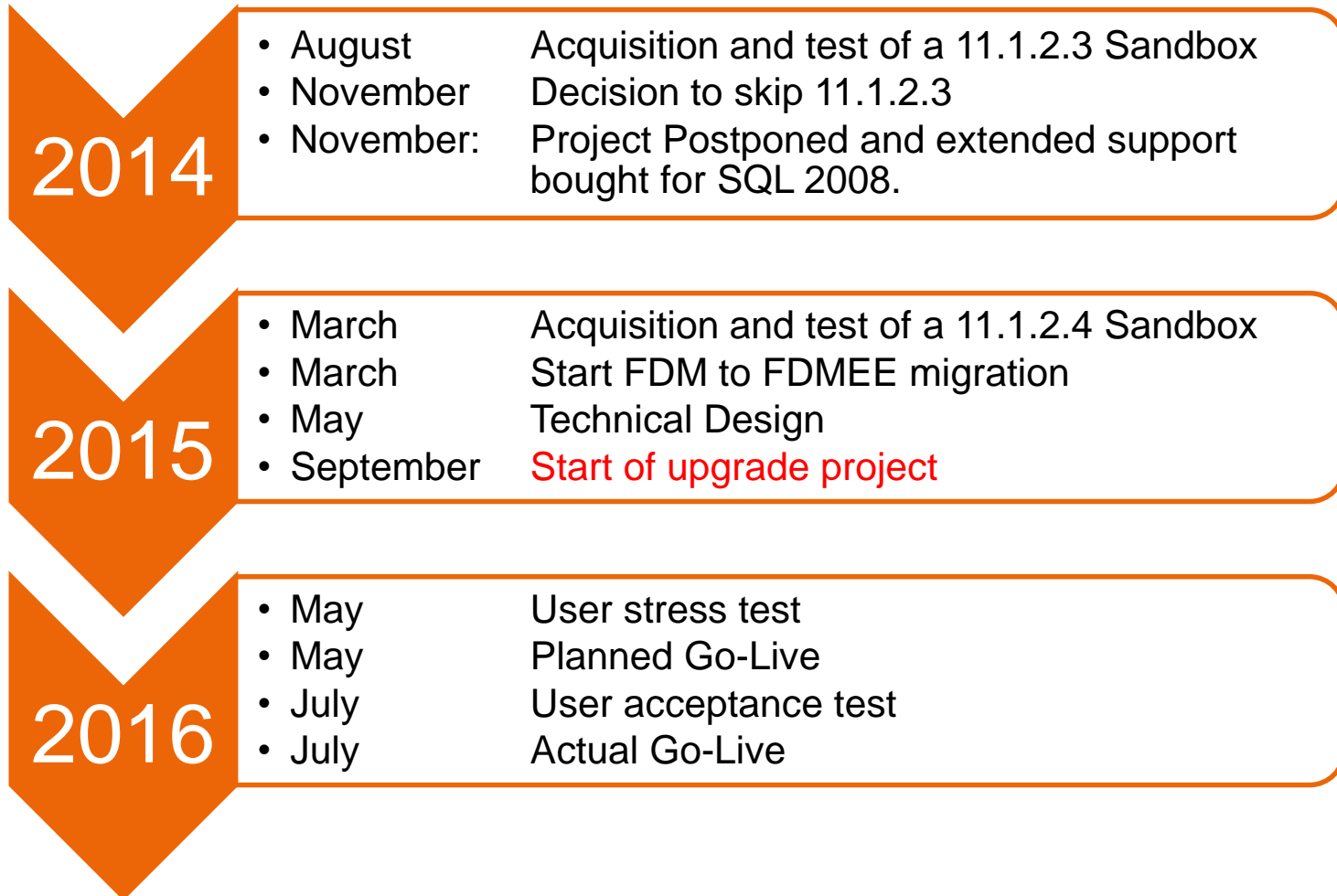
Upgrade to HFM Version 11.1.2.4 with new Hardware

- 11.1.2.4 is the latest HFM Version in the market
 - Internet Explorer compatibility is not an issue anymore
 - Faster and improved Workspace interface
 - Better usability of the Workspace
 - Major performance gains in calculations and consolidations
 - 11.1.2.4 is dependent on newer Software and more powerful hardware
- Decision was made to go with Option 3
- **Hardware upgrade and Upgrade of HFM to Version 11.1.2.4**

Preparation-Project Outcomes



From preparation to project



Challenges



- Workspace looks different → user training needed
- SmartView/Merlin/Office → new versions need to be rolled out
- Plant IT-coordinators need to be informed
- Tight time plan
 - Trainings and rollouts need to be scheduled
 - Interference with year end reporting and Outlook1 2016 needs to be avoided
- Merlin looks different → Merlin-training needed

Ecosystem after the upgrade



HFM

- Development
 - Windows Server 2012
 - SQL Server 2012
 - HFM 11.1.2.4
 - 64 CPUs/128 vCPUs
 - 512 GB Memory
- Production
 - Windows Server 2012
 - SQL Server 2012
 - HFM 11.1.2.4
 - 64 CPUs/128 vCPUs
 - 512 GB Memory
- Disaster Recovery
 - Windows Server 2012
 - SQL Server 2012
 - HFM 11.1.2.4
 - 32 CPUs/64 vCPUs
 - 512 GB Memory
- Archive
 - Windows Server 2012
 - SQL Server 2012
 - HFM 11.1.2.4
 - 12 CPUs/24 vCPUs
 - 64 GB Memory

Ecosystem after the upgrade

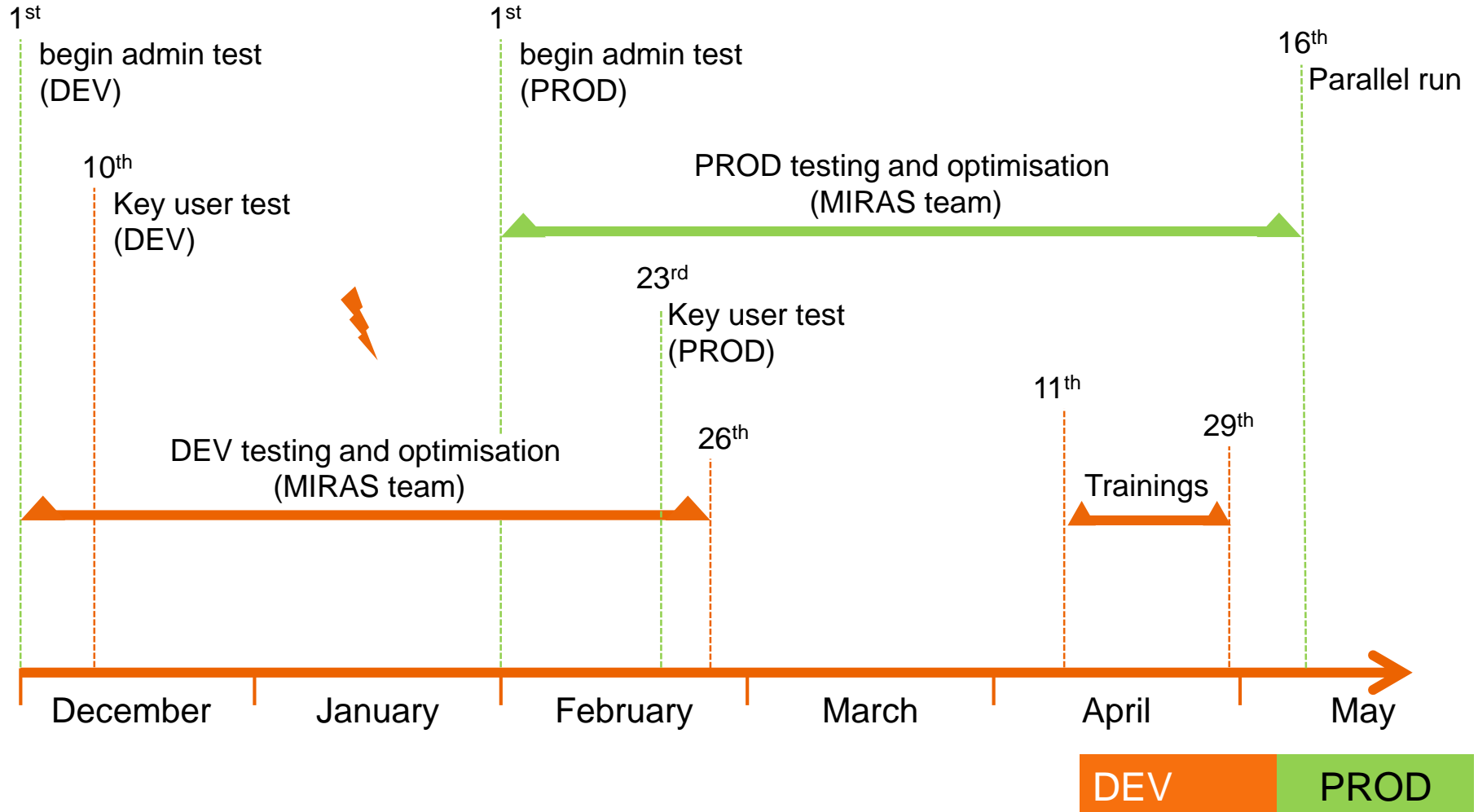


Peripherals

- Internet Explorer 11
- Office 2016
- Smart View
- Merlin XL Version 4
- EPM Maestro 15.3.4.9



Project summary - Time Line



Changes in detail



HFM Version 11.1.2.4		Looks different	Works different	Looks the same	Works the same
Standard users					
Excel	SmartView			X	X
Web	Selecting Point of View	X			X
Web	Web data entry forms	X			X
Web	Data Grids	X			X
Web	Process Control	X			X
Non standard users					
Web	FDQM replaced by FDMEE	X			X
Excel	Merlin XL	X	X		
Excel	Excel 2010+ (enforced by Merlin)	X	X		

Tool Compatibility



Office	MIRAS 3				MIRAS 4			
	2007	2010	2013	2016	2007	2010	2013	2016
SmartView 11.1.2.3	✓	✓	✓	✗	✗	✗	✗	✗
SmartView 11.1.2.5:510	✓	✓	✓	✗	✓	✓	✓	✗
Merlin V1 (current)	✓	✓	✗	✗	✗	✗	✗	✗
Merlin V2 (not yet rolled out)	✓	✓	✓	✗	✗	✗	✗	✗
Merlin V3 (MIRAS 4)	✗	✗	✗	✗	✗	✓	✓	✓

Tool Compatibility



SmartView

Office	MIRAS 3				MIRAS 4			
	2007	2010	2013	2016	2007	2010	2013	2016
SmartView 11.1.2.3	✓	✓	✓	✗	✗	✗	✗	✗
SmartView 11.1.2.5:510	✓	✓	✓	✗	✓	✓	✓	✗

- The current SmartView Version does not support MIRAS 4
- New Smartview Version supports MIRAS 3 and MIRAS 4
- New Version works and looks the same
- Can be rolled out already
- Proposed rollout: after Year End 2015, starting Jan 20th
 - Vienna HQ → central Roll out
 - Other → through local IT departments

Tool Compatibility



Merlin

Office	MIRAS 3				MIRAS 4			
	2007	2010	2013	2016	2007	2010	2013	2016
Merlin V1 (current)	✓	✓	✗	✗	✗	✗	✗	✗
Merlin V2 (not yet rolled out*)	✓	✓	✓	✗	✗	✗	✗	✗
Merlin V3 (MIRAS 4)	✗	✗	✗	✗	✗	✓	✓	✓

- The current Merlin Version does not support MIRAS 4
- Version 2 compatible with MIRAS 3 but not with MIRAS 4
- Merlin Version 3 not compatible with MIRAS 3
- Version 2 looks and works the same as Version 3
- Version 2 can be installed in parallel to current Version and enables earlier trainings

Issues with new Merlin version

- Needs additional Server-Software → could result in additional costs
- enforces new Excel → Office 2010+ has to be rolled out in parallel to project
- Merlin V2 not compatible with MIRAS 4
- Merlin V3 not compatible with MIRAS 3
- Parallel installation of Merlin V2 and V3 not possible
- Fallback to MIRAS 3 only possible with re-rollout of Merlin V2
- Merlin V3 is still in development
- Very short testing period before productive use

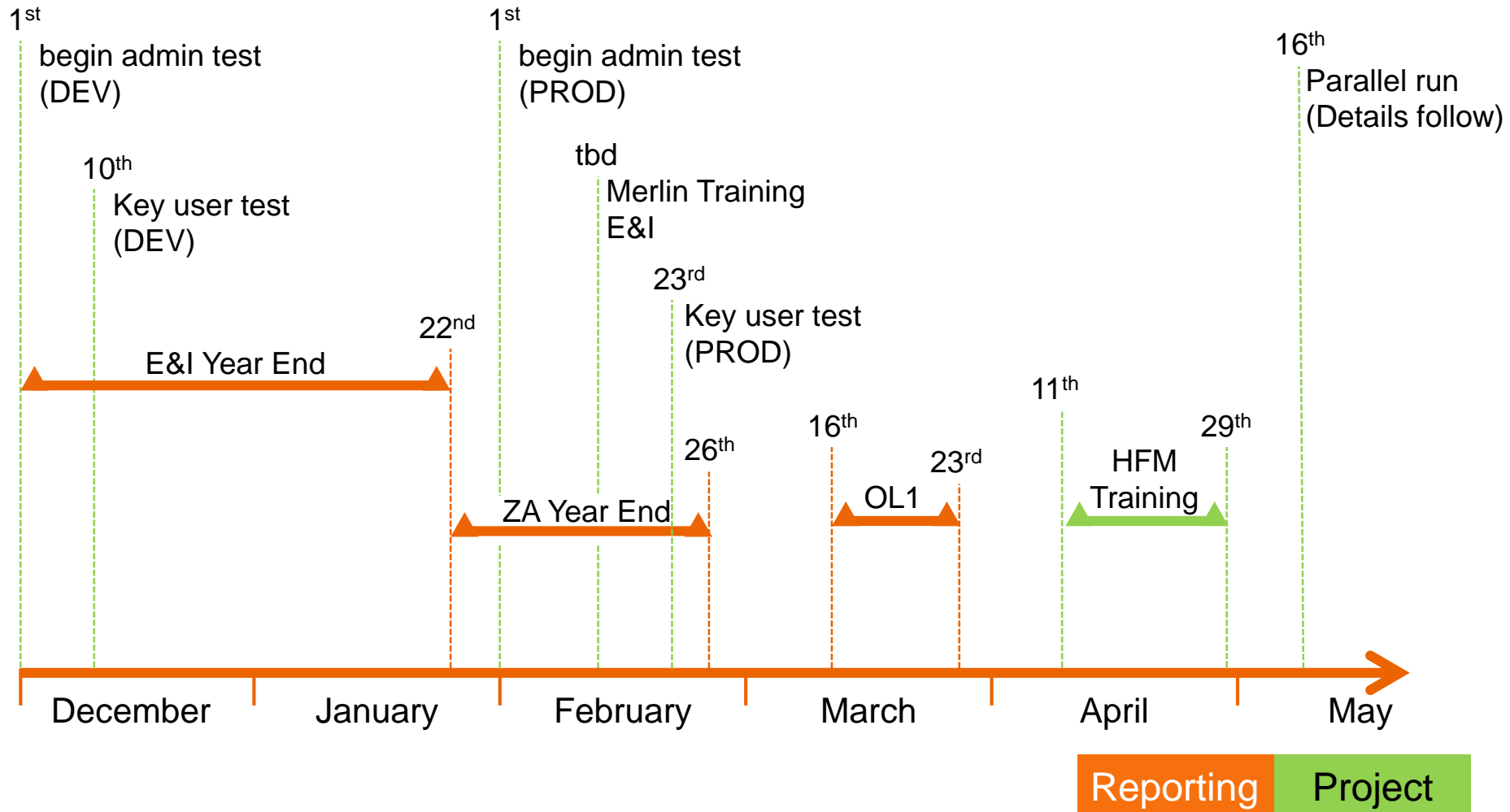
Proposed Merlin Rollout Timeline



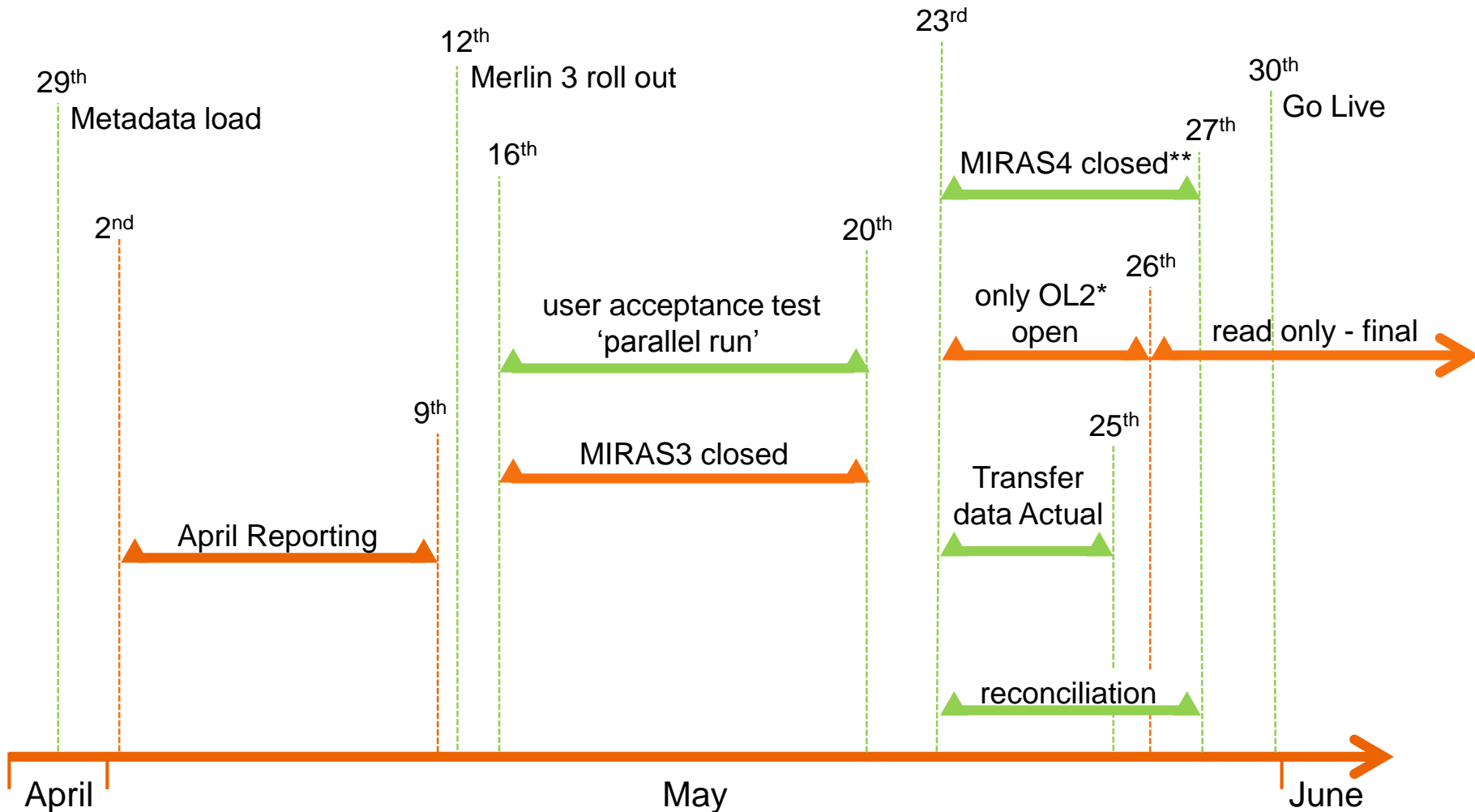
- Conclusion: two rollouts, first Merlin 2, then Merlin 3
- Exceptions: London and Johannesburg
 - Already have Merlin 2 and were trained

- February 2016 Merlin V2 Rollout E&I
- Late February 2016 Merlin V2 Training (ca. 2 hours)
- April 2016* Office 2010+ Rollout (to be confirmed in January Meeting)
- Mai 2016 Merlin v3 Rollout (same interface → no training needed)

Project summary - Time Line



Project summary - Parallel run



* Outlook2 will be transferred on 26th

** Metadata load on 27th

MIRAS 3
MIRAS4

Decision to Delay project



30th of March

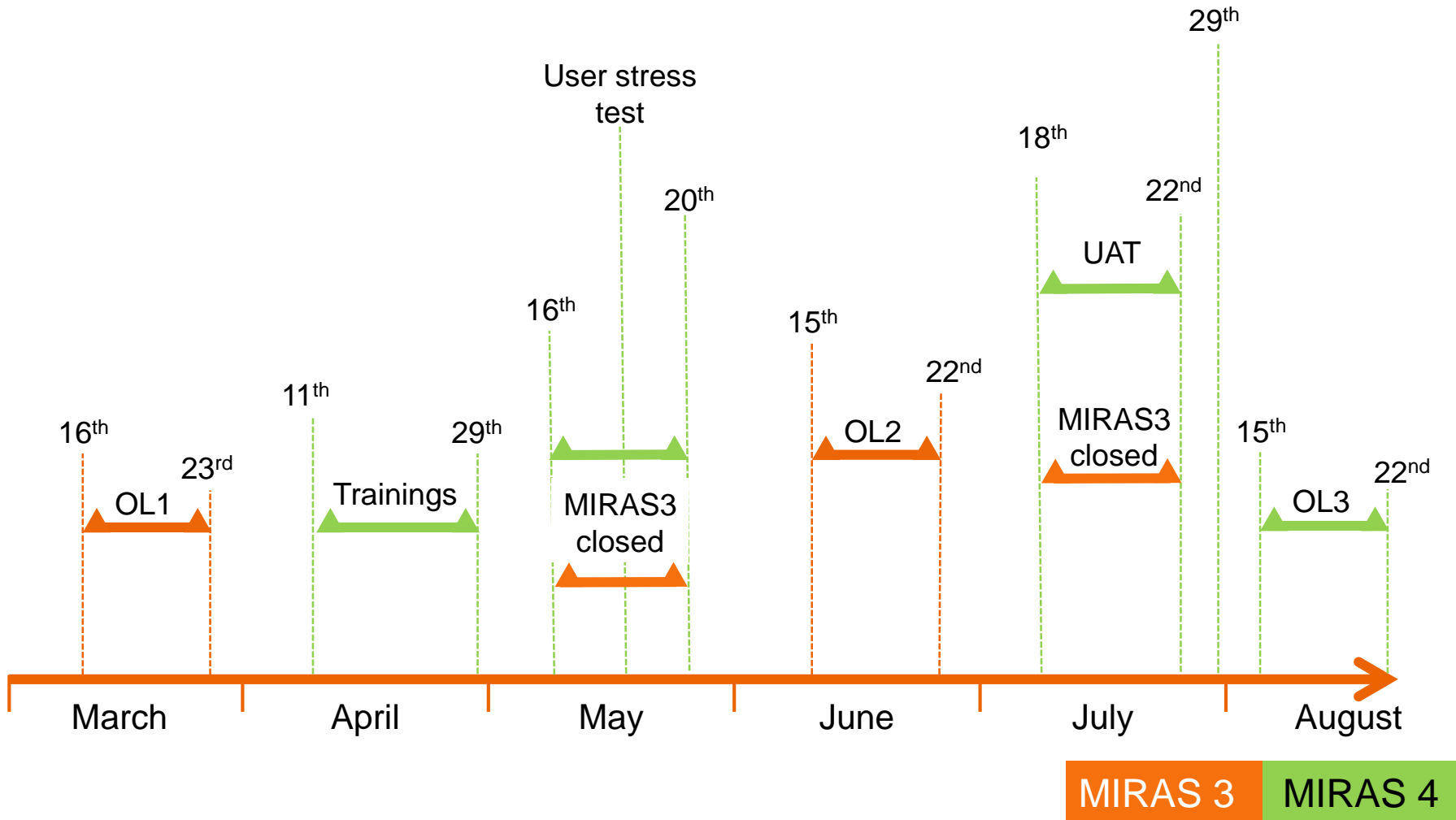
- During our internal Admin-Tests we found some instabilities in the system
- Through escalation with Oracle, we will shortly receive a fix for this
- Due to the instabilities uncovered during the tests, we propose to follow a more conservative approach including two user tests before going live
 - First: user stress test (1 day) btw. 16th and 20th May
used to identify further problems (if any)
 - Time to solve the problems
 - Second: UAT 18th – 22nd July – used to verify the problems have been resolved
- This leads to a new go-Live date:
29th of July 2016
- Instead of May 30th 2016

Consequences of delaying the project

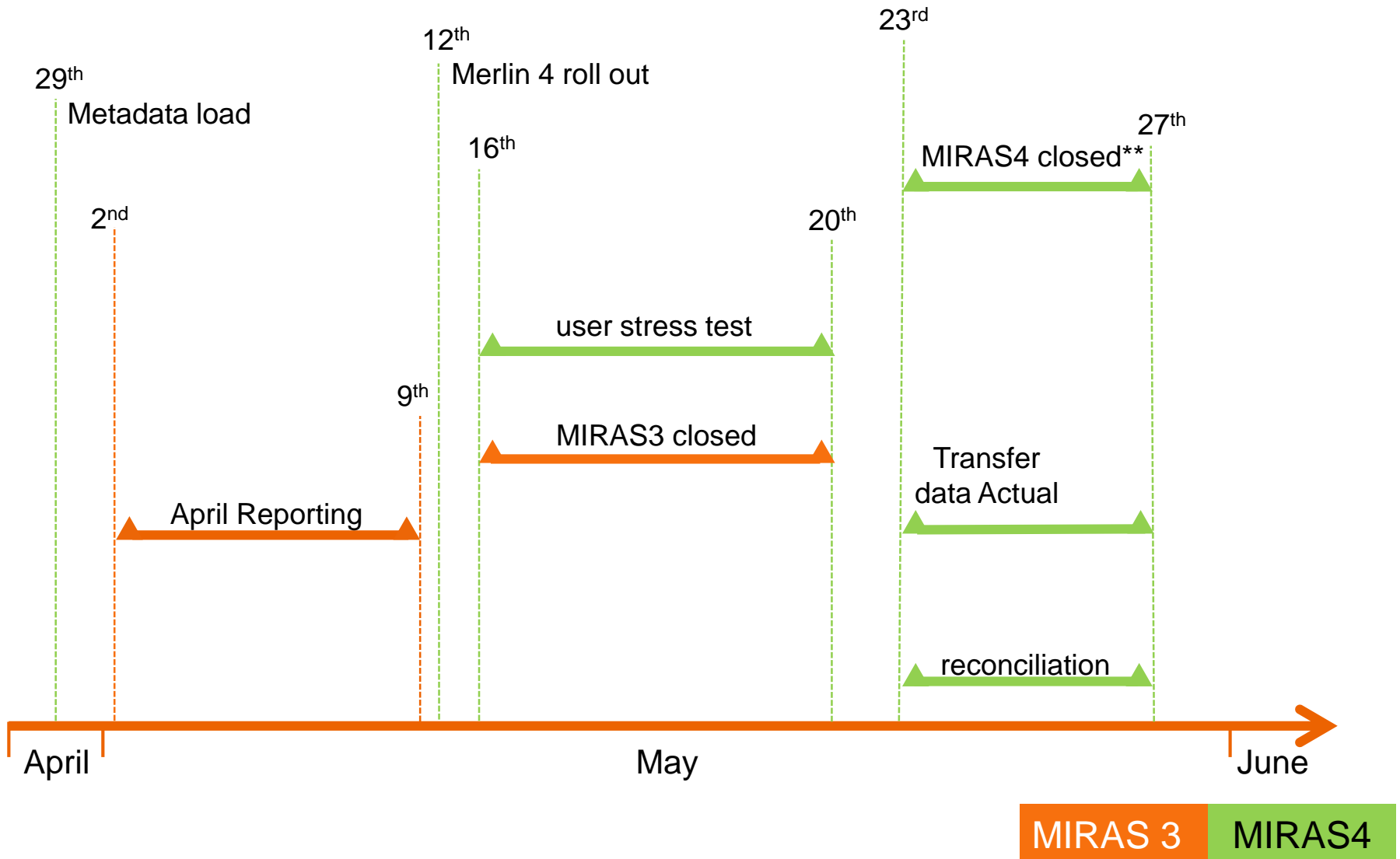


- This delay means
 - The system needs to stay frozen for statistical changes until May 30th
 - Outlook 2 Reporting will be performed in MIRAS 3
 - Outlook 3 Reporting will take place in MIRAS 4
- It remains as planned
 - KeyTeach online trainings
 - On-site trainings (Merlin/Office)
 - Merlin/Office Roll-Out
 - SmartView Roll-Out

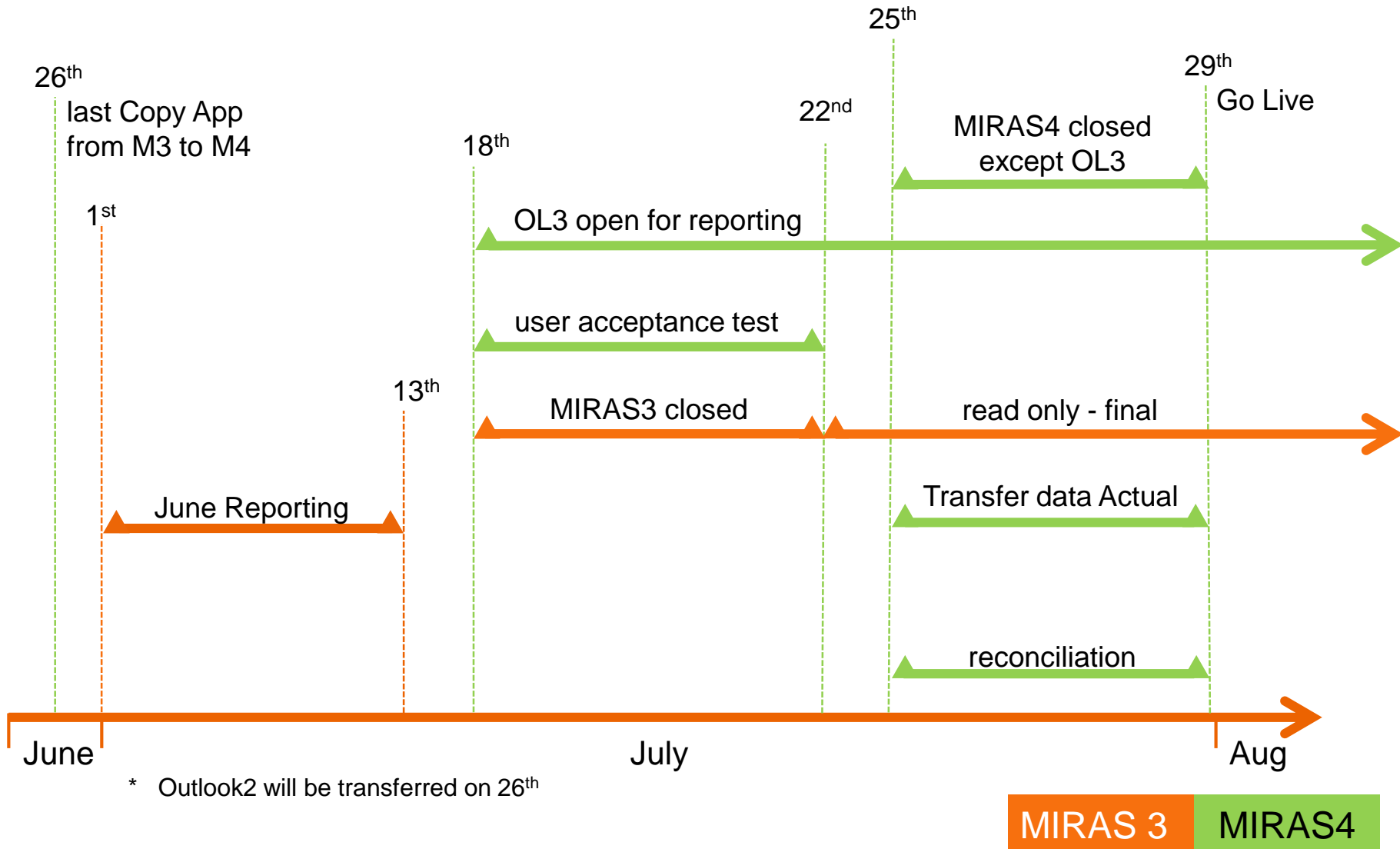
Project summary - Time Line (new)



Project summary – user stress test



Project summary – user acceptance test



Project status – MIRAS (HFM)



- We received a patch from Oracle sometime at the beginning the of April 2015.
- This patch fixed
 - several of the smaller issues that we encountered
 - All major issues which we were affected by
- Still room for improvement
 - We are in contact with Oracle about further improvements
- User stress test showed that the system is robust enough for Mondy reporting

Archive environment

Two options - Option 1

- Keep the current MIRAS 3 Archive as a legacy system
 - Access is limited via a Terminal Server
 - Operating System and Browser/Office will not be updated
- Setup new Archive only for new Applications
- Pros
 - data integrity
 - snapshot of old rules and Memberlists can be kept
 - Audit trail not broken
- Cons
 - Additional cost for legacy system
 - Access restricted through Terminal Server
- Note
 - No Merlin availability on archive

Applications on: MondyArch

- CAP120116
- CAPEX2
- FIN2008
- FIN2010
- FIN2012
- FIN2012PRE
- FIN2013
- FIN2015
- MCAPEX2010
- MIRAS2007
- SIM2013

Archive environment

Two options - Option 2

- Upgrade current Archive to 11.1.2.4 (including all Applications)
 - Old Applications may have compatibility issues with 11.1.2.4, this means
 - Rules, Memberlists, Journal Templates may need to be adapted
 - Changes to those elements will impact the consolidation status of the system
- Pros:
 - Archived Applications will be in 11.1.2.4
 - Meaning the access can be performed through the standard browser or via Smartview
- Cons:
 - Massive Work upgrading and reconciling each application
 - Possibly breaking audit trail
- Note
 - No Merlin availability on archive

Project status – DR test



- From May 25th on MIRAS 4 Prod will be switched to DR
- MIRAS Team will change data in DR
- Over the weekend a rollback to production will happen
- On Monday 30th of May MIRAS 4 Prod will be reactivated for admin access
- The changed numbers will be checked
- On Tuesday May 31st Miras 4 Prod is fully available again

In conclusion

Multiple Tests

- Multiple automated load tests
 - With every new patch
 - Several bugs identified during load test
- Full admin tests (after every patch)
 - Problems in the automated application upgrades
 - Patches deliver new Problems
- User stress test
 - No automated test can really replace having all users reporting in the system
- User acceptance test
 - Moving user problems and misunderstandings to the phase BEFORE the Go-Live

In conclusion

Open Service Requests with Oracle

- Several critical bugs identified during tests
 - System instabilities due to Socket-flooding
 - System instabilities due to Database connection flooding
 - Wrong calculation-status of <Entity Currency Total>
 - Circular references in Tasklists bring down Web Tier (every user can do it)

Lessons learned / Important steps in the project



- Training users for...
 - New Workspace
 - New Office Version
 - New Merlin
 - FDMEE
- Multiple Tests
 - Multiple automated load tests
 - Full admin tests (after every patch)
 - Key user tests
 - User stress test
 - User acceptance test
- Opening Service Requests with Oracle

What changed?

- What is better
 - Consolidation performance
 - Support of modern browsers (IE 11, current Firefox → NO Chrome)
 - Quick selection of Point of View
- What are draw-backs
 - Workspace is overloaded with animations giving a sluggish experience
 - Smart View much slower
 - Still several bugs open with Oracle
- What is different
 - User interface is different to 11.1.2.1 but similar to 11.1.2.3
 - Data Grids do not freeze when consolidations are started from them but also do not update automatically
 - Cannot open the same form twice
 - e.g. to compare Entities / Scenarios

Hyperion Focus 16

Thank you

10

AMOSCA
2006-2016

**REPORT
AUTHORITY**

EPM Maestro



FDMEetoolbox

Merlin^{xl}



Accelatis
Powering IT. Empowering Business.

UK OUG
UK ORACLE USER GROUP

keyteach[™]

INFRATECTS

CXO COCKPIT

APPLIED OLAP
Strategic Enterprise Spreadsheet Management Specialists

ORACLE

cubus

INNOVATE TAX
COMPLIANCE WITHOUT COMPROMISE

TPH

Forward-looking statements disclaimer

This document includes forward-looking statements. All statements other than statements of historical facts included herein, including, without limitation, those regarding Mondi's financial position, business strategy, market growth and developments, expectations of growth and profitability and plans and objectives of management for future operations, are forward-looking statements. Forward-looking statements are sometimes identified by the use of forward-looking terminology such as 'believe', 'expects', 'may', 'will', 'could', 'should', 'shall', 'risk', 'intends', 'estimates', 'aims', 'plans', 'predicts', 'continues', 'assumes', 'positioned' or 'anticipates' or the negative thereof, other variations thereon or comparable terminology. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Mondi, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Such forward-looking statements and other statements contained in this document regarding matters that are not historical facts involve predictions and are based on numerous assumptions regarding Mondi's present and future business strategies and the environment in which Mondi will operate in the future. These forward-looking statements speak only as of the date on which they are made.

No assurance can be given that such future results will be achieved; various factors could cause actual future results, performance or events to differ materially from those described in these statements. Such factors include in particular but without any limitation: (1) operating factors, such as continued success of manufacturing activities and the achievement of efficiencies therein, continued success of product development plans and targets, changes in the degree of protection created by Mondi's patents and other intellectual property rights and the availability of capital on acceptable terms; (2) industry conditions, such as strength of product demand, intensity of competition, prevailing and future global market prices for Mondi's products and raw materials and the pricing pressures thereto, financial condition of the customers, suppliers and the competitors of Mondi and potential introduction of competing products and technologies by competitors; and (3) general economic conditions, such as rates of economic growth in Mondi's principal geographical markets or fluctuations of exchange rates and interest rates.

Mondi expressly disclaims

- a) any warranty or liability as to accuracy or completeness of the information provided herein; and
- b) any obligation or undertaking to review or confirm analysts' expectations or estimates or to update any forward-looking statements to reflect any change in Mondi's expectations or any events that occur or circumstances that arise after the date of making any forward-looking statements, unless required to do so by applicable law or any regulatory body applicable to Mondi, including the JSE Limited and the LSE.