Unify Change Request Form

Step 1 – Initial Assessment

Ref Number: CR033	**Request Type**: CR – Change Request
Change Title: GSC – ePPDS	
Requested By: Helmut Rutschke / Tara Douglas-Home	
Date Raised: 17/05/2024	
Decision Required Deadline: 24/05/2024	
Tower: GSC	

Detail of Proposed Change Request:

Proposed Change:

The proposed change is to bring into scope and implement ePPDS as part of the UNIFY manufacturing solution to provide the business with the capability to manage automatic re-scheduling at factory level within the frozen horizon. This will require the use of native functionality (ePP/DS), which is not currently in the Unify SAP BoM scope.

In summary this will mean that:cash

- BY plans supply for the entire horizon.
- BY optimizes the schedule down to the execution horizon and sends this data over to S/4HANA.
- S/4 ePPDS reschedules the plan as and when required in the execution horizon (pull in, push out, skip order etc.).
- ATP on S/4 will indicate if the rescheduled plan is feasible from a NTM perspective.
- The new S/4 schedules for the execution horizon is sent to BY daily. BY takes this and replans outside the execution horizon.

The proposed change will be added to the Radom scope. The figure below outlines the impact on the Radom SIT schedule, but demonstrates how this will be achieved within the current indicative go-live date.

	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Prepare	Team Setup and preparation															
Design		Dependency Review		PDD Completion												
Design			SAP S/4 System Setup													
Build					ePP/DS Customizing, Configuration and FUT											
Build		Master Data Requirements and Validation														
Build			SIT Data Load Completed													
Build		hub Build and E2E Testing completed														
Build					TR movement											
SIT							SIT Unify + E2E									
SIT					SIT Preparation		ePP/DS SIT									
UAT / Training							User Training ePP/DS UAT									
Deploy										Dress Rehearsel						
Deploy					Job Role List			Cutover preparation			Cutover					
Deploy					Job Roles mapped to KU/EU								GL			
Deploy													Hypercare			
Deploy									Transition to support							
Deploy																

Unify and E2E timelines

The timescales and resourcing have been developed with assumptions, pre-requisites, risks and an understanding of the entry/exit criteria for each phase.

Options Considered:

The E2E and UNIFY programmes carried out a detailed review of options with representatives from each, including Tower Lead, BPLs, Delivery Partners, EA and additional business representatives. The three options are outlined below.

4.1 | SAP – Rescheduling in Execution Horizon	4.2 | SAP – Line (Re)Scheduling Optimisation	4.3 | SAP – Line (Re)Scheduling incl. MRP
• BY plans supply for the entire horizon.	• BY plans supply for the entire horizon.	• MRP, Production Planning, Procurement Planning and Detailed Line Scheduling in the Execution system.
• BY optimizes the schedule down to the execution horizon and sends this data over to S/4HANA.	• BY creates a capacity and material constrained schedule and sends it via planned orders to S/4HANA.	• BY creates the consolidated demand plan for factories.
• S/4 ePPDS reschedules the plan as and when required in the execution horizon (pull in, push out, skip order etc).	• S/4 ePPDS re-optimizes and reschedules within the constraints in the short-time horizon (e.g. 2-4 weeks).	• S/4 ePPDS re-plans and optimizes the schedule within overall line scheduling horizon.
• ATP on S/4 will indicate if the rescheduled plan is feasible from a NTM perspective.	• ATP on S/4 will indicate if the rescheduled plan is feasible from a NTM perspective.	• For changes to plan, S/4 MRP is used to position NTM's to support the changed plan.
• The new S/4 schedules for the execution horizon is sent to BY daily. BY takes this and replans outside the execution horizon.	• The new S/4 schedule for the short-time horizon is sent to BY daily.	• Once a day, the new picture for the full scheduling horizon is sent back to BY. BY takes this and replans finished good requirement plan accordingly.

The consideration took into account evaluating the options using the following criteria established by Enterprise Architecture:

- Delivery Time: Option has the potential to meet indicative Radom timelines (subject to design)
- Total Cost of Ownership: 165kGBP RISE contract credits usage; 3-5 month Unify design & build (cost tbc)
- Requirements Alignment: Closed existing rescheduling solution gap; simulation capabilities intact
- User Experience: Manual activity for planners to process changes
- Strategic Alignment: TBC
- Route to Market: 2 scheduling solutions in use for different purposes
- Technical Debt: Data & integration impact minimal, BY impact minimal, SAP impact minimal
- Risks/Dependencies: Completion of integrated design; Completion of design and build in time by introducing new SAP module
- Extensibility: TBC

What is the proposed option?

It was agreed to recommend Option 4.1 - SAP – Rescheduling in Execution Horizon using ePPDS.as it is the least level of disruption to current plan, processes & designs; Lowest Total Cost of Ownership, but it is recognised that planning will continue in operation in two scheduling solutions

This option will impact GSC in the following areas:

- An increase in resources required (as specified above) with PPDS skills;
- Estimate of three current WRICEFS with additional design requirements. This will be confirmed at the conclusion of the detailed design phase.
- Estimate one new WRICEF to be designed;
- Configuration, both new and current, to be developed;
- Increase testing scope with new scenarios; and
- Additional training support to users.

The following assumptions, requisite and risks are included with the recommended option:

Assumptions:

- SIT can commence ad planned and PPDS will be deployed into SIT when build completed.
- SAP license approval is required to include ePPDS in SAP BoM.

– PPDS will be available for development 31st July

Key prerequisites:

- Development system is ready before Build phase starts
- Dependencies and design gaps (with E2E and Unify) identified and resolved prior to Build phase start
- Master Data available for SIT and UAT
- Job roles updated prior to SIT and UAT

Risks:

- Change management activities completion on time (before SIT and UAT start)
- Data cleansing, harmonization and load
- Availability of E2E programme and input
- Software not available for development start
- Process and approach to Design closure does not achieve completion within timescales

Was it discussed with the PLT?

This was presented to a wider leadership group including the SLT from both UNIFY and E2E, Enterprise Architecture and BPOs and BPLs for the 4.1 Option. It was unanimously recommended for approval.

Source & Reason for Change:

The scope of the planning and execution systems do not include technical capabilities of scheduling in the execution horizon. In addition, the selected planning system is not offering any technical capabilities of rescheduling in the execution horizon.
Implementing the solution is needed in order to enable the Radom plant to use the rescheduling functionality. In the initial E2E design it was considered that BY would be the tool to be used but as detailed business requirements were gathered, the necessity to amend the solution with a rescheduling tool became obvious. From 5 proposed solutions one was selected and further elaborated (divided into 3 sub-options). From this 3, the option with implementing S/4 ePP/DS was selected as preferred.
As per the discussions with the BPL's, the process order changes (rescheduling) are frequent. Therefore, implementing a solution that would enable the shop floor employees to adjust the production schedule is an obvious benefit and complements the end-to-end production planning process as part of the Supply Chain.

Priority Assessment: [1]	Base Reason For Change: [a]
1. A must; the final deliverable will not work without this change	a. Additional requirements/functionality being added to the programme's scope
2. An important change; its absence would be very inconvenient, although a 'work-around' is possible	b. Stakeholder/governance additions, changes, removal;
3. Potentially an important opportunity to improve on programme cost, schedule or quality	c. Slippage in plan or budget overrun requiring tighter controls;
4. A nice-to-have but not vital, cosmetic change; of no importance	d. Exceptions as a result of issue resolution or risk mitigation;
5. A minor change to the scope of a programme, does not involve a change or Non-Conformance	e. Changes in the programme's anticipated benefits.

Rating of Change (Key below): [High   ]

Very Low

- Minimal consequence
- Minimal cost impact (≤ £100k)
- Minimal impact to schedule/resource
- Minimal risk or impact on other programme/projects

Low

- Minor consequence requiring some minor redesign or reword
- Minor cost impact (≤ £250k)
- Minor impact to schedule

Medium

- Significant consequence requiring redesign or reword
- Significant cost impact (≤ £500k)
- Significant impact to schedule

High

- Goals of programme/project unlikely to be achieved
- Excessive cost impact (> £500k)
- Excessive impact to schedule

"Do nothing" implications (Quantify the impact upon the Tower or wider programme if this Change is not approved.)	Lack of application providing rescheduling possibilities, which occur frequently on the shop floor. If no decision is made, E2E and Unify cannot go live with Radom as the gap of rescheduling in the execution horizon creates a significant risk for Imperials business continuity
Areas affected by the Change (i.e. other Towers, programmes like E2E SC etc.)	Unify and E2E
Alternatives sought to reduce negative impact of the change (provide details)	Rescheduling Optimization in BY without the possibility to reschedule the plan in the execution horizon
Identify any Risks (provide details)	The rescheduling functionality in ePP/DS supports the business requirements based on day to day execution of processes. As stated in the Do nothing section, lack of such application means working in the old ways of working and a number of interfaces should be reviewed/created. Such impact analysis has not been done to the details

Commented [KS1]: E2E and Unify can still go live without PPDS as rescheduling tool

Commented [GP2R1]: Yes, however what would be the plan B if no ePP/DS is implemented? We would need to train the users to do all the rescheduling in excel and than send the information back to BY via the Data Hub. Sort of a project in parallel

Commented [VA3R1]: That is a senior leadership decision to make and they have decided not to pursue the manual option. There is no value in reopening this discussion

Step 2 – Detailed Assessment

A: Cost Impact <Requestor to update>

Description: *e.g. The additional requirement will mean an increase in the programme's resources*

The additional cost to the Baseline.
3 resource K4 Sr. Consultant – India (Remote)
1 resource K3 Manager - India (Remote)
1 resource K2 Sr. Manager – Romania (Remote)
1 resource K1 Project Manager (Poland)
1 resource K4 PMO UK (local)
1 resource K2 Sr manager US (Remote)
Duration: May 24 - July 25
Estimated Days: 1625 days
Estimated Cost: £1,266,683 GBP

1 resource Functional Consultant ePPDS: £84,000 GBP (Imperial Contractor 14 weeks @£1,200 / day)

I additional specialist Trainer resource: £175,000 (throughout FY25 @ £750 day).

Total est. Cost: £1.525.683 GBP

<Programme Finance Director to update>	**Operational Expenditure**	**Capital Expenditure**
Impact on current Financial Year (FY) Unify budget	-	**£621k**
Impact on overall Unify budget	-	**£1,526k**

B: Applicable impacts, including time/quality/scope <Requestor to update>

Description: *e.g. the time for software implementation has been increased by x weeks*

Time: This scope will be delivered as part of the Radom Go Live 2025

Quality: N/A

Scope: Additional Scope requested as part of the E2E Supply chain project, which will be delivered as part of the Radom Go Live in 2025

Milestone Table

Milestone Ref:	Title of Milestone Impacted:	Current End Date:	Proposed End Date:
TBC	Radom Design	31st May 2024	31st August 2024
TBC	Radom Build Completion	30th June 2024	30th November 2024

Step 3 – Impact Assessments:

A. Finance Tower lead
No Impact

B. Global Supply Chain Tower Lead
CR raised by GSC Tower – details in description

C. Global Commercial Operations (including Sales & Trade Marketing) Tower Lead
No impact.

D. Business and Technology Integration
From a BT&I perspective the key impact will be for the basis team to prepare the system in terms of satisfying the technical prerequisites – i.e. applying a number of notes and configuring technical elements required for the PP/DS functionality to be deployed and active. Do not expect this to be a major constraint but it is a significant piece of work for Basis.

E. Data & Analytics
▪ Impact on Tower's/Function processes, what is the impact? ePPDS requires specific Data setting, and it must be defined during detailed design sessions lead by BPLs where Data Migration tower representation should be part of. The impact on Radom relevant Data Object is unknown – as CR is on very high level. Gjorgi Trajcov → yes, the data settings are defined during the detailed design sessions. From the first glance we know that the interfaces between S/4 and BY are covering all the data objects needed for ePP/DS. This means that from MD point of view there are no new additional objects (still to be confirmed). There will be a requirement to review all materials relevant for re-scheduling and mark them in the Master Data view. This is a one time activity after all materials are loaded. nb - From transactional point of view this is not applicable, but we will need one new interface to share ePP/DS Planned Order number. ▪ Impact on Tower's/Function scope / effort / cost / timeline / resources? By end of June we should finish the Data Mapping session with Radom team so by bringing this new functionality to scope it will have significant impact on scope of data objects relevant for migration (either on existing data object or by bringing new data objects to the scope) and as this is very late coming requirement there is high probability we will not be able to meet SIT Radom data migration deadlines and work around for this must be defined if ePPDS should be part of SIT test scenarios.

6

Gjorgi → as mentioned above, we do not expect any additional data fields/objects due to ePP/DS. This is still to be confirmed. If there is something than the team would generate manually for UT/SIT in alignment with the E2E and Unify program (list of objects predefined for SIT).

- Is this a new change?

This is a NEW change. There are not enough information to understand what kind of expertise we could potentially miss in Data Tower. This CR impact on Reporting and Analytics and MDG processes is not clear and not even mentioned in the scope – so more information is required to get all the impacted aspects covered. Ownership for data beringed by ePPDS must be defined by BPL and Tower Lead and shared with Data Tower.

BPLs (with support of Tower leads) are responsible for Data Design in Unify Program, and it means they are responsible for providing all the rules, Target values list, config and data object dependencies information to Data Migration we can use during data migration.

Gjorgi → at the moment we do not have more information, much more detailed sessions should take place. Initially I do not think there is impact on Reporting design as we are "upgrading" a functionality that was planned to be used in Blue Yonder. The Data Hub remains the middleware of choice and without knowledge of the Reporting Tower, I'd say the impact is minimal to none.

regarding MDG we would need a session to review the design and assess. If all data objects relevant for planning (that are needed for BY) are in S4HANA, than again the impact would be minimal to none. This needs to be reviewed though.

- Can you absorb the change/impact for your Tower/Function?

We are looking for dedicated KT session with the Designing team to get more information and to be able to estimate potential cost and resource impact.
The requirement of introducing ePPDS itself is supported.

Gjorgi → the team needs to be put in place before we start providing more details. The longer this CR goes the higher the risk of the presented timeline to be relevant (parallel go live with Radom E2E and Unify)

F. Deployment, Test & Cutover

No Impact. Support of this CR as SIT for this change starts Dec/Jan and allocation of resources and scope can be planned in advance for both test and cutover.

G. Change Management & Training

Change and Communications: no significant impact – these changes are manageable within the current resourcing / effort.

Training: 1 additional trainer resource is required in FY25 to create training materials and train Super Users for UAT and train End Users ready for go live. Contract trainer is estimated at £750 per day from October 2024.

H. Architecture & GIT (Technical / Solution)

Minimal impact from a Radom delivery perspective, additional effort expected within the SIT but exact integrations and flow of data to be understood with design. The additional functionality will need to be knowledge transferred to support organizations. This was not within the original scope of functionality and will mean an uplift in costs that will need to be factored with AMS supplier and the internal Enterprise delivery team.

 Pro's
•Least level of disruption to current plan and aligns to project timelines
•Minimal rework of current design
•Lowest total cost of ownership
•No custom build required
•Easily scales to other regions
•Provides flexibility to accommodate future changes and will not impact future upgrades
•Provides the best user experience of all options

Con's
•Some aspects of the design will need to be replicated in MSD when deploying Unify/E2E solution to Africa
(Nb. This is the least impactful of all the options)
•Scheduling capability is split between BY and SAP (ePPDS). However, this split is aligned to job function so
it will not impact user experience

I. Dependent ImB Programmes (Requestor to specify)

E2E BY Programme:
This Change is required as Blueyonder is not delivering a solution to do rescheduling in the frozen horizon.
Therefor E2E SC P is supporting ePPDS as a solution.
Impact on data and integration for Blueyonder? Communication of changes between Blueyonder and S4 via
Data hub. Frequence?
Gjorgi comments --> are the impact on data and integration questions for this CR? They are answered in
separate sections in this document. Communication from BY to S4 is defined in the IDD document, the PDD
document will be reviewed and updated during blueprinting.
E2E D&I Impact: Cannot be assessed with certainty as the solution design between BY and S4 considering
PPDS is not completed. Going in notion is, nothing will change with ppds coming online and expected
outcome is that it pushes rescheduled process orders to BY. If this assumption is true, then no impact as the
process order is part of the current integration to BY. Any change in assumption must be reviewed with data
and integration team to assess the impact. Expect solution design team to get in touch if there is a change.

J. Programme Financials (Finance Director)

These costs were not previously assumed in our bottom-up forecast for FY24, so will utilize some of the
limited remaining contingency.

K. Other (Requestor to specify)

N/A

L. SAP Credit Consumption impact (Paul Masilamani)

Annual "RISE Credit" Consumption: **£181,253**

M. Commercial Considerations (Rachel Freeman)

Resource rates are accurate via the contract agreement, commercial impact, additional cost to the baseline circa £1.3m. Due to the E2E program also requiring this solution (shared), potential charge sharing internally for finance purposes.

N. Partner's Impact Assessment

The delivery partner is able to resource this requirement. The resources are identified and will be onboarded pending CCB approval and signing of the CCN

O. Planning Impact Assessment (Adi Taiwo)

There's an impact of overall Radom baselined design date – Proposal to be taken to Steerco w/c 27th May to extend design to accommodate revised design timelines for ePPDS (amongst others)
Impact on baselined build date, pushing build completion to 29th November.
Once Go Live date for Radom has been communicated, assumption is that ePPDS build will overlap with Unify/E2E SC SIT and the SIT/UAT will also be aligned to Unify/E2E SC SIT and UAT.
 In conclusion, there's an impact to the plan but will be accommodated within relevant milestone timelines – we will be working with the assumption that all project task will be completed in alignment with all Radom delivery.

P. Programme Management

The CR is required to ensure we are able to deliver Radom go-live aligned with the E2E programme. From a programme management perspective the impacts are on:
- plan: the proposed plan here presented will be incorporated in the wider replanning for the Radom go-live. The proposal is acceptable assuming the start of SIT in Dec 24 (1 month after the Start of the wider E2E – Unify integrated SIT)
- resources: impact on additional IB resources is identified and detailed in this CR. The Delivery Partner resources are identified and will be subject to a due diligence during the Commercial CR process.
- cost: the estimation of the Delivery Partner cost will required due diligence that will be done as part of the Commercial CR process