SAP Profitability & Performance Management:

Optimize your Capital Asset Investment Planning Process with PaPM and SAC

Richard Dampf, Managing Director
Head of Americas Presales
msg global solutions, Inc.

Las Vegas

2024

SAPinsider

What We'll Cover

Maple Leaf Food was searching for an Asset Investment Planning tool with the ability to assess various capital project types such as profit increase, maintenance, sustainability.

Customizable to MLF, the solution allowed for standardized criteria/framework and allow for decision criteria across different dimensions such as:

- Financial
- Operational risks
- Health and safety risks
- Environmental and sustainability impact

Enable an optimized multi-year capital plan based on highest score/value projects leveraging dimensions above, as well as considering resource constraints and other criteria.

Perform "what-if" scenarios to understand monetary, and risk impact of deferring projects, changing the capital budget.

SAP Profitability and Performance Management

Asset Investment In Two Steps

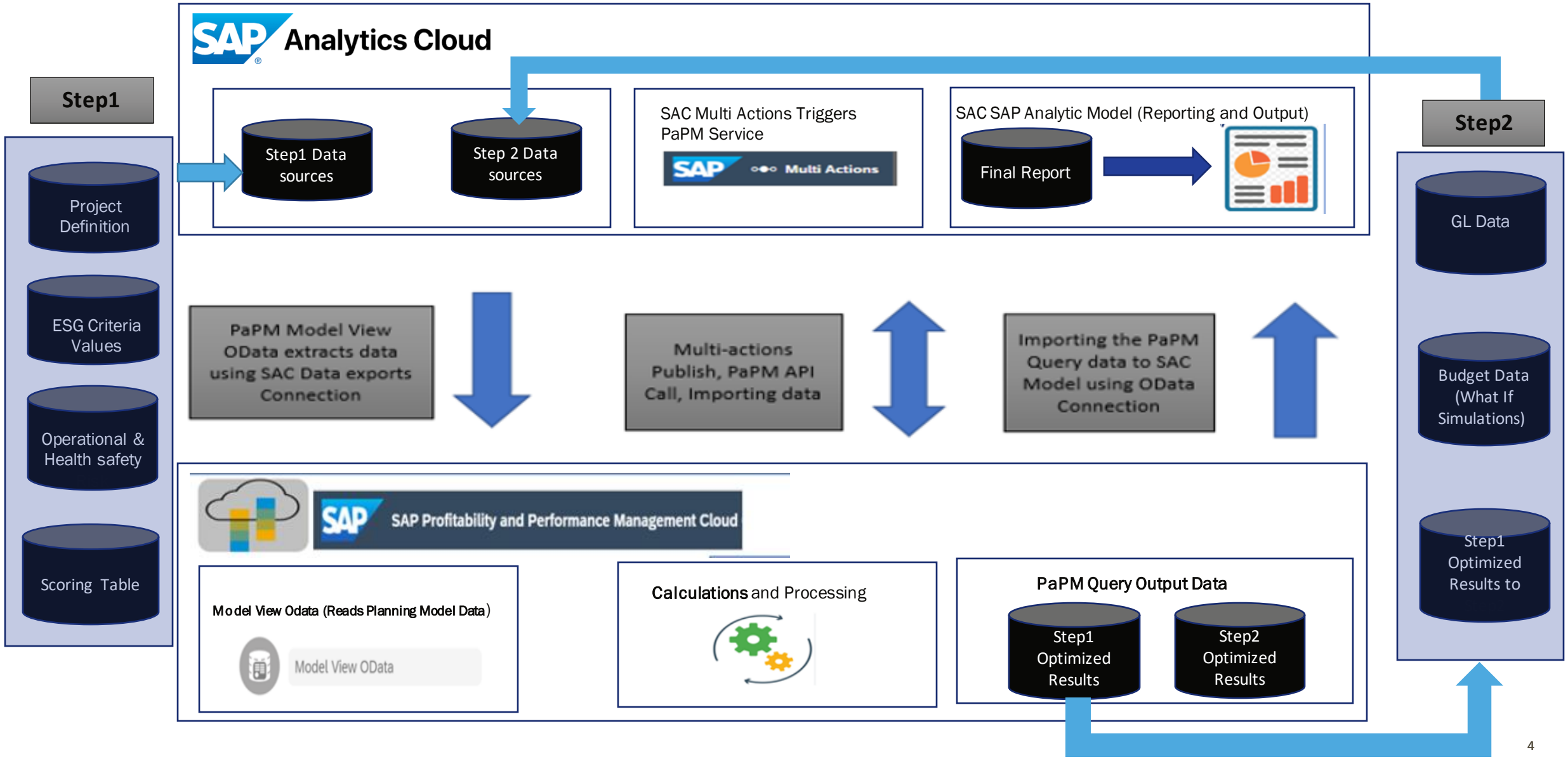
Step 1: High level assessment

- Prioritize the assets to invest based on different criteria (financial, risk, safety, sustainability, …) and to take a decision in the investment priorities for each plant. The output will be used to make a decision with a deeper analysis of the investment.

Step 2: Detailed level assessment for selected investment

- Projects which have been selected as eligible for Asset investment, will be subject to a more detailed assessment
- The goal of this step is to build the investment business case for the assets which passed step one. Now the detailed assessment of the business case is done incorporating linear programming to optimize the investment process. The analysis of the asset will be done with the following criteria: Financials, Safety, Sustainability, Operational risks.
- The final output report will be available to the investment committee.

Asset Investment Planning Architecture (Step 2)



Calculations in SAP PaPM (Triggered By SAC)

Step1 PaPM Project Evaluation (Scoring Based):

1. Pay back period calculation
2. Operational & Health and Safety Severity Risk calculation
3. Score assignment based on the ranges
4. Total weight calculation for all 4 criteria:

   -Financial,
   -Sustainability (9 different criteria's)

   -Operational risk
   -Health and safety risk

5. Based on the Total Weights, a Rank is assigned to a Project

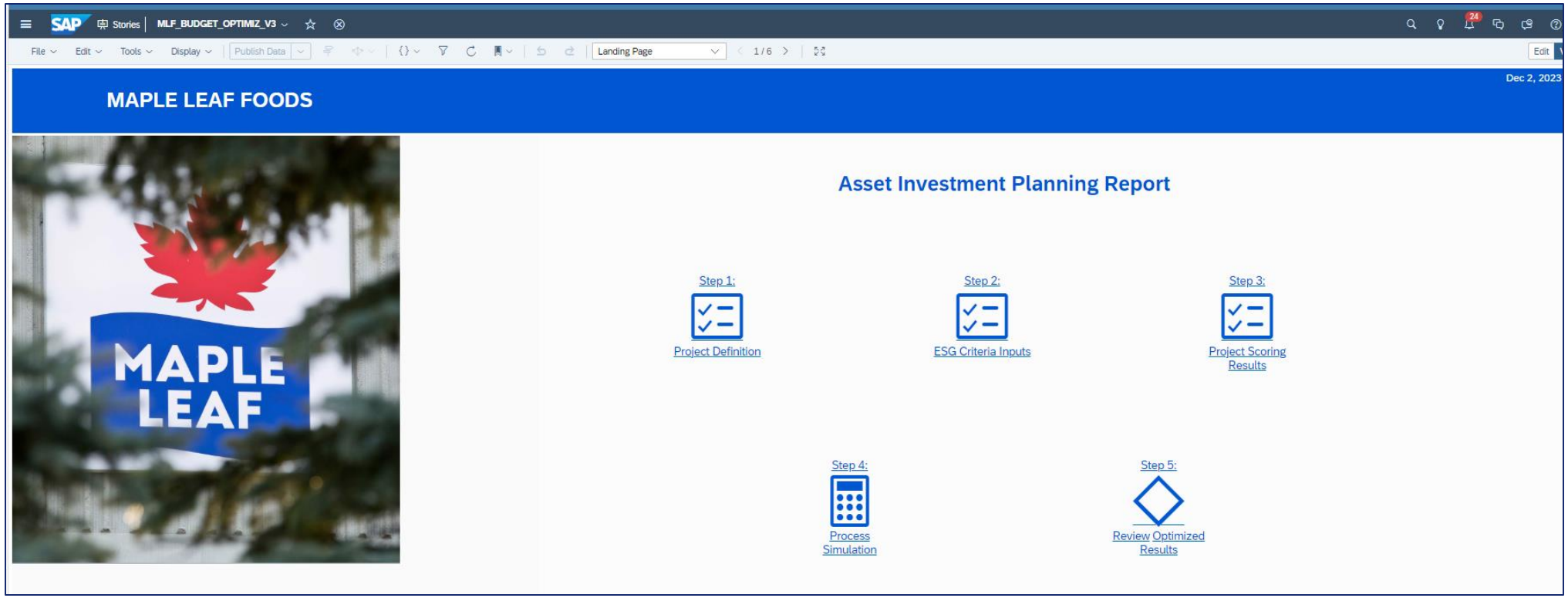
Step2 PaPM Project Optimization (Budget & Total Cost):

1. Step 1 projects will be passed into GL data.
2. Total cost of investment of projects compared with Budget data per year and PaPM will optimize projects and provide the results back to SAC

Landing Page

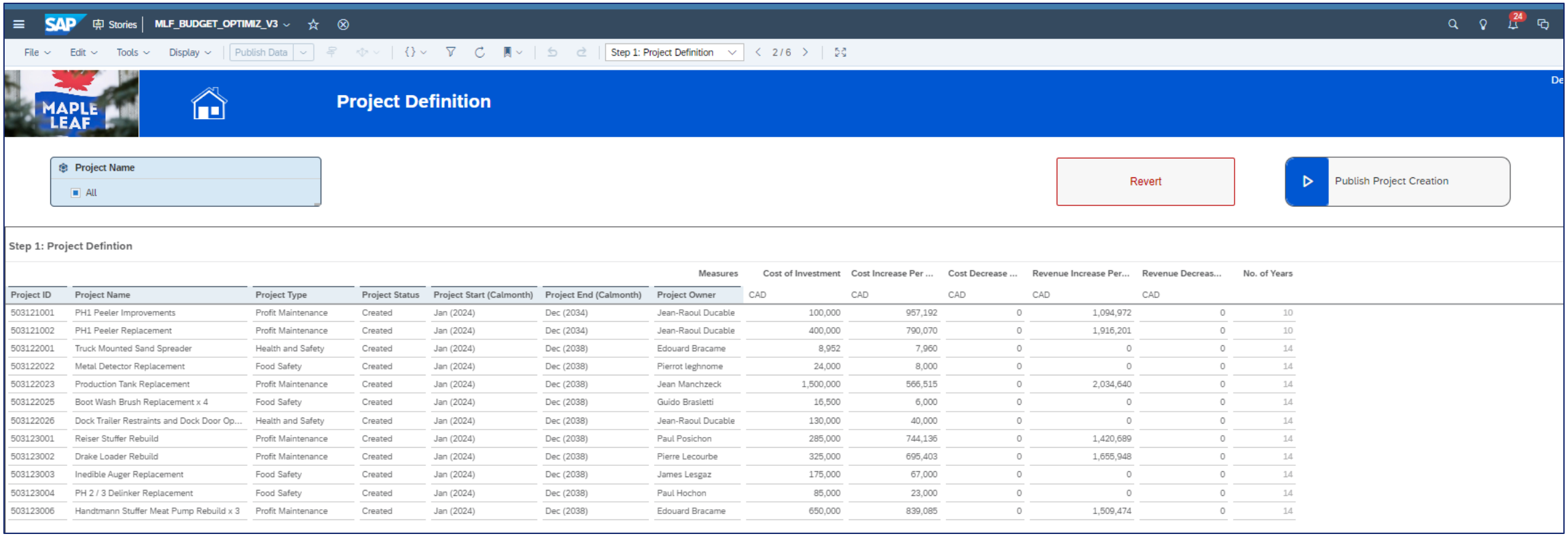
The Landing Page provides access to the various tabs available in the SAP Analytics Cloud Model. Each tab contains either mandatory user entry fields, results of calculations and reporting metrics.

The tabs included are Project Definition, ESG Criteria, Project Scoring Results, Process Simulation and finally The Review of the Optimized Results.



Step 1: Project Definition

The Project Definition is the tab and first step in the process whenever a user wants to evaluate a project. The user maintains field entries for Project ID, Project Name, Project Type, Status, Start Date, End Date, and Owner. Financial related fields for Cost of Investment, Cost Decrease Per Year, Revenue Increase Per Year, Revenue Decrease Per Year and Number of Years for Project Duration will also be added . This is the primary Input to PaPM.

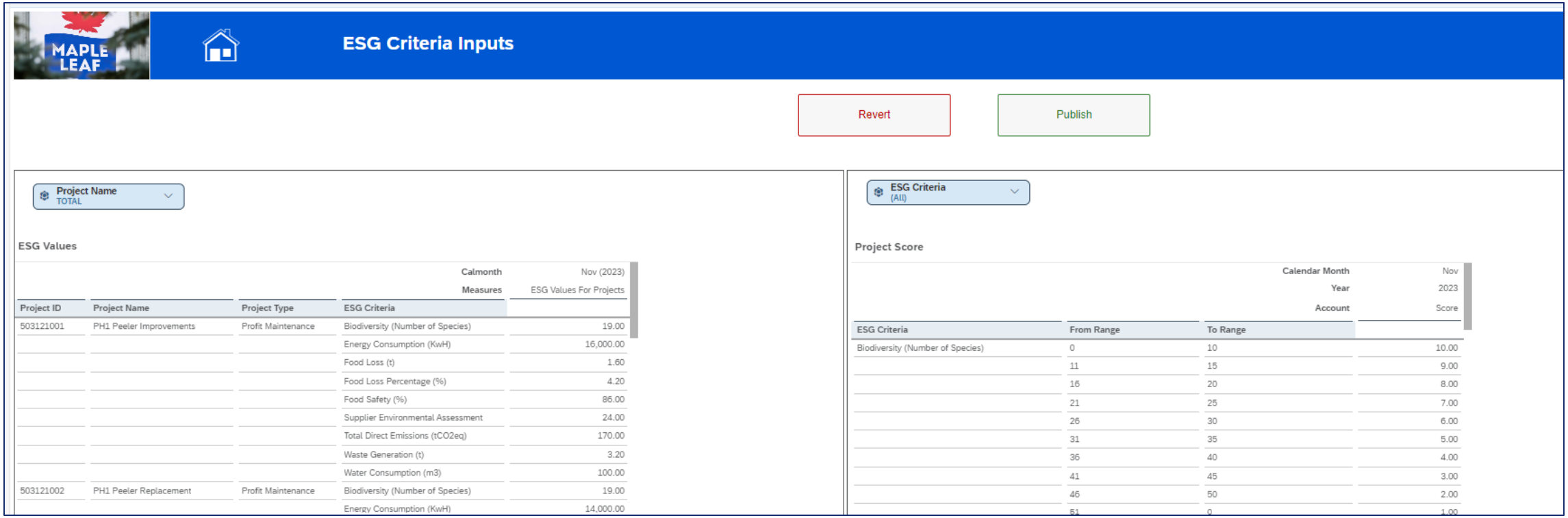


						Measures	Cost of Investment	Cost Increase Per ...	Cost Decrease ...	Revenue Increase Per...	Revenue Decreas...	No. of Years
Project ID	Project Name	Project Type	Project Status	Project Start (Calmonth)	Project End (Calmonth)	Project Owner	CAD	CAD	CAD	CAD	CAD	
503121001	PH1 Peeler Improvements	Profit Maintenance	Created	Jan (2024)	Dec (2034)	Jean-Raoul Ducable	100,000	957,192	0	1,094,972	0	10
503121002	PH1 Peeler Replacement	Profit Maintenance	Created	Jan (2024)	Dec (2034)	Jean-Raoul Ducable	400,000	790,070	0	1,916,201	0	10
503122001	Truck Mounted Sand Spreader	Health and Safety	Created	Jan (2024)	Dec (2038)	Edouard Bracame	8,952	7,960	0	0	0	14
503122022	Metal Detector Replacement	Food Safety	Created	Jan (2024)	Dec (2038)	Pierrot leghnome	24,000	8,000	0	0	0	14
503122023	Production Tank Replacement	Profit Maintenance	Created	Jan (2024)	Dec (2038)	Jean Manchzeck	1,500,000	566,515	0	2,034,640	0	14
503122025	Boot Wash Brush Replacement x 4	Food Safety	Created	Jan (2024)	Dec (2038)	Guido Brasletti	16,500	6,000	0	0	0	14
503122026	Dock Trailer Restraints and Dock Door Op...	Health and Safety	Created	Jan (2024)	Dec (2038)	Jean-Raoul Ducable	130,000	40,000	0	0	0	14
503123001	Reiser Stuffer Rebuild	Profit Maintenance	Created	Jan (2024)	Dec (2038)	Paul Posichon	285,000	744,136	0	1,420,689	0	14
503123002	Drake Loader Rebuild	Profit Maintenance	Created	Jan (2024)	Dec (2038)	Pierre Lecourbe	325,000	695,403	0	1,655,948	0	14
503123003	Inedible Auger Replacement	Food Safety	Created	Jan (2024)	Dec (2038)	James Lesgaz	175,000	67,000	0	0	0	14
503123004	PH 2 / 3 Delinker Replacement	Food Safety	Created	Jan (2024)	Dec (2038)	Paul Hochon	85,000	23,000	0	0	0	14
503123006	Handtmann Stuffer Meat Pump Rebuild x 3	Profit Maintenance	Created	Jan (2024)	Dec (2038)	Edouard Bracame	650,000	839,085	0	1,509,474	0	14

Step 2: ESG Criteria

Users will enter 9 separate ESG Criteria for each Project

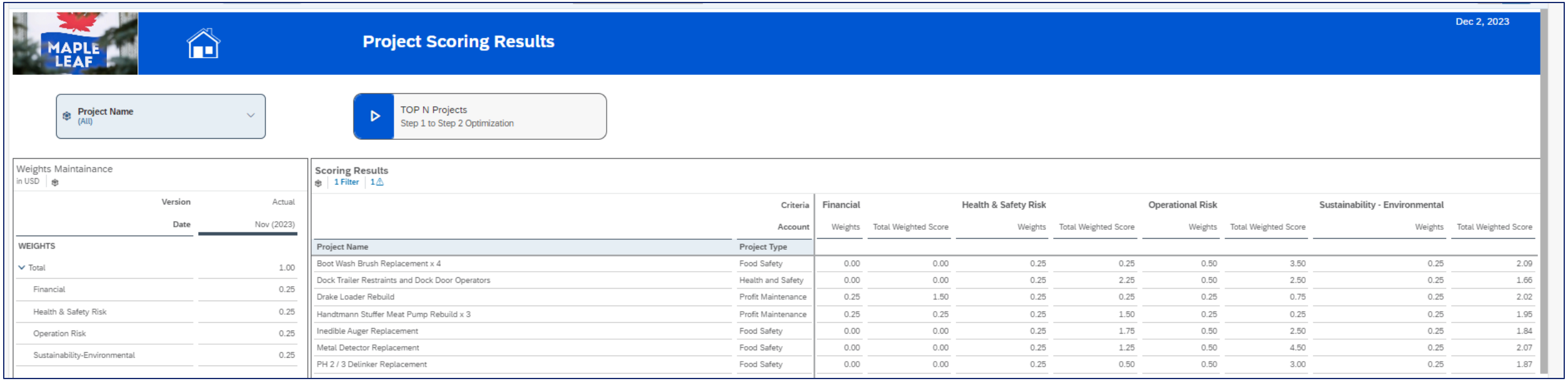
The second input form includes criteria for Financial, Operational, Health and Safety and ESG. These are assigned a “From” and “To” Range with a scoring. The values on the left and right table will be compared to one another to assign the scores.



Step 3: Project Scoring Results

Continuing from the prior tab, project ESG values and project scoring ranges are coming from SAC and available in PaPM. Payback periods, Operational & Health and Safety severity and total weights are calculated based on scoring for 4 criteria's and project ranks are assigned based on the total weights.

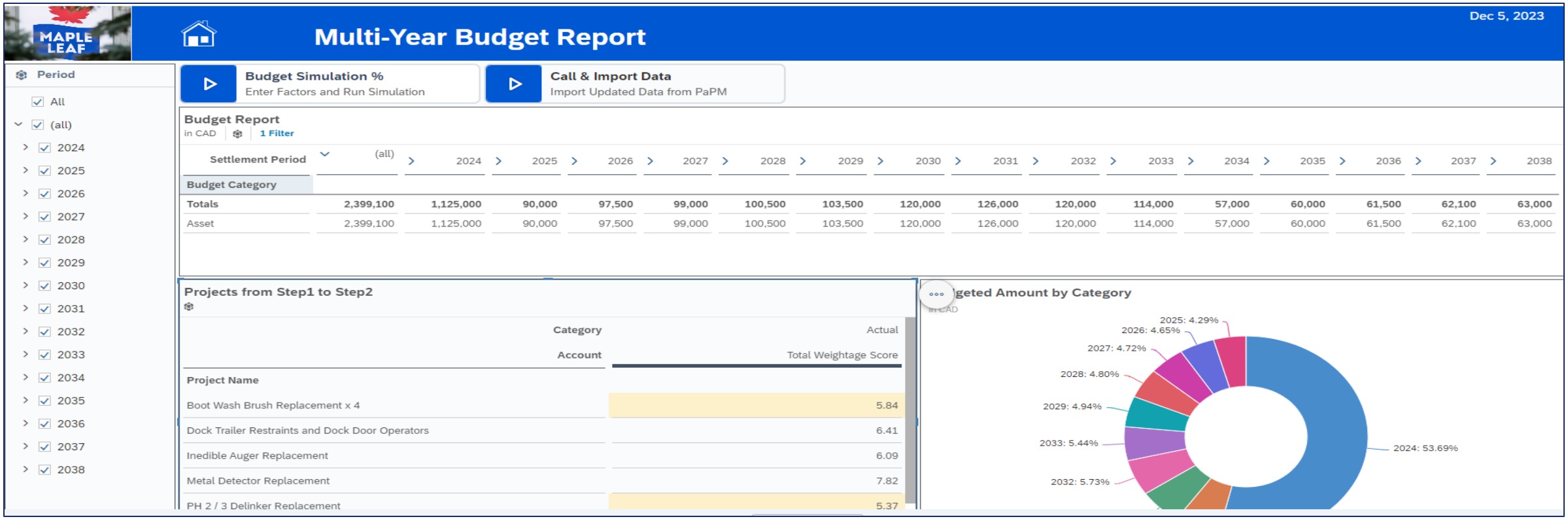
This tab display's the ranking and ESG Criteria. Step 1 to step 2 optimization button is at the top. It will ask the users what projects to send to step 2. In PaPM, step 1 is used to evaluate the projects. Step 2 will be the optimization of the projects and these are linked to general ledger data.



Criteria		Financial		Health & Safety Risk		Operational Risk		Sustainability - Environmental	
Account		Weights	Total Weighted Score	Weights	Total Weighted Score	Weights	Total Weighted Score	Weights	Total Weighted Score
Project Name	Project Type								
Boot Wash Brush Replacement x 4	Food Safety	0.00	0.00	0.25	0.25	0.50	3.50	0.25	2.09
Dock Trailer Restraints and Dock Door Operators	Health and Safety	0.00	0.00	0.25	2.25	0.50	2.50	0.25	1.66
Drake Loader Rebuild	Profit Maintenance	0.25	1.50	0.25	0.25	0.25	0.75	0.25	2.02
Handtmann Stuffer Meat Pump Rebuild x 3	Profit Maintenance	0.25	0.25	0.25	1.50	0.25	0.25	0.25	1.95
Inedible Auger Replacement	Food Safety	0.00	0.00	0.25	1.75	0.50	2.50	0.25	1.84
Metal Detector Replacement	Food Safety	0.00	0.00	0.25	1.25	0.50	4.50	0.25	2.07
PH 2 / 3 Delinker Replacement	Food Safety	0.00	0.00	0.25	0.50	0.50	3.00	0.25	1.87

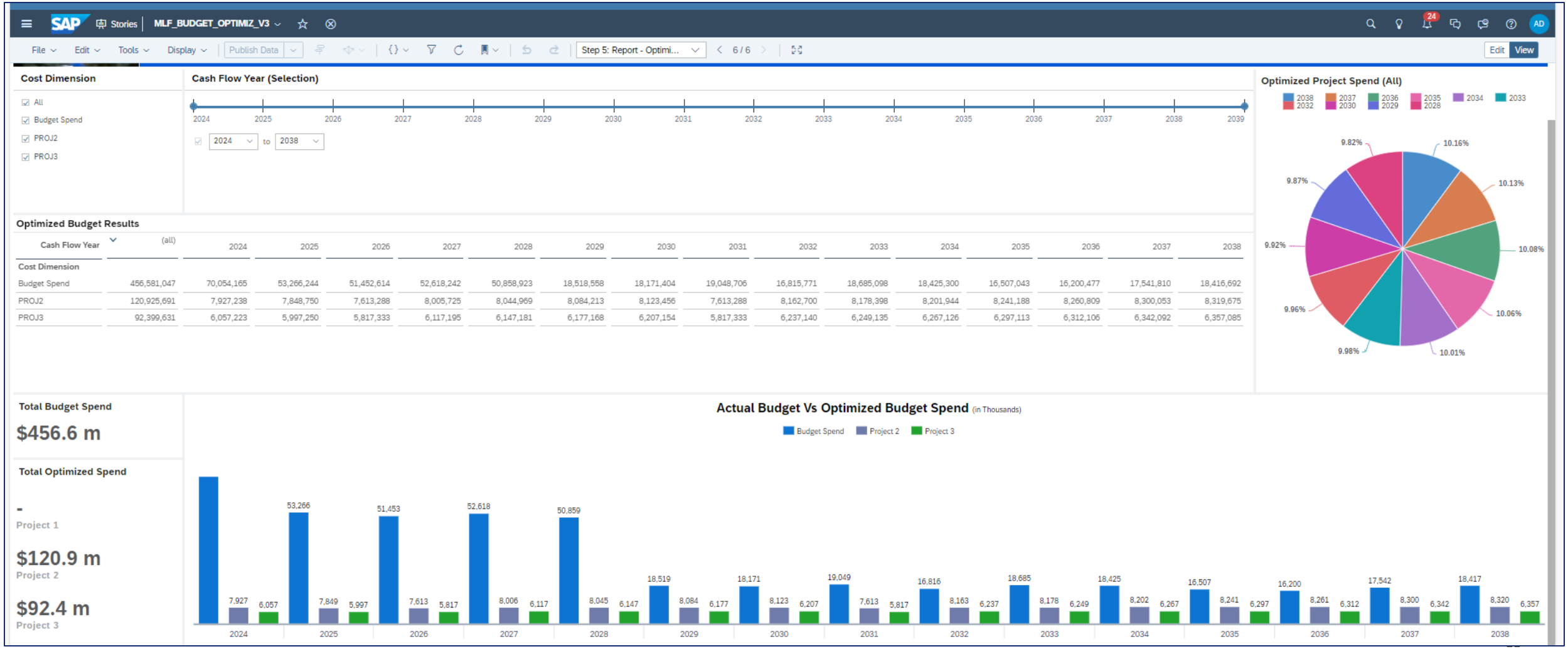
Step 4: Process Simulation

In this tab, budget simulation is supported by using fixed percentages per year or by a fixed amount using the budget simulation percentage data action button. By using the Multi Action it calls the PaPM optimization logic to optimize the projects.



Step 5: Optimized Project Results

This tab includes the Final Report of the optimized project with consideration to step 1 and step 2 calculations.



Cash Flow Year	(all)	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Cost Dimension																
Budget Spend	456,581,047	70,054,165	53,266,244	51,452,614	52,618,242	50,858,923	18,518,558	18,171,404	19,048,706	16,815,771	18,685,098	18,425,300	16,507,043	16,200,477	17,541,810	18,416,692
PROJ2	120,925,691	7,927,238	7,848,750	7,613,288	8,005,725	8,044,969	8,084,213	8,123,456	7,613,288	8,162,700	8,178,398	8,201,944	8,241,188	8,260,809	8,300,053	8,319,675
PROJ3	92,399,631	6,057,223	5,997,250	5,817,333	6,117,195	6,147,181	6,177,168	6,207,154	5,817,333	6,237,140	6,249,135	6,267,126	6,297,113	6,312,106	6,342,092	6,357,085

Step 1: High Level Assessment

Las Vegas

2024

Overall Scoring

Overall scoring = (weight finan. x (A) + weight sustain. Env. x (B) + weight H&S x (C) + weight risk x (D))/ ∑ weights

- (A) = Financial scoring
- (B) = Sustainability scoring
- (C) = Health & Safety scoring
- (D) = Operational Risk scoring
- Weight :
  - We put the same weight for all these 4 criteria assessed at this stage (can be changed)
- weight finan. = 1, weight sustain. Env. = 1, weight H&S = 1, weight risk = 1
  - Exception is when Payback period is <0 (= revenue is zero), then
- weight finan. = 0, weight sustain. Env. = 1, weight H&S = 1, weight risk = 2

Assessment

- Filter can be done by project type
- Sort can be done by topic: financial, sustainability, Operational Risk, Health & Safety
- Plant or Profit Center

Financial Scoring

NPV is calculated

Payback period (ROI) is calculated

A = financial scoring is given by the table

Scoring is based on Payback Period

$$\text{Payback Period} = \frac{\text{Cost of Investment}}{\text{Average Annual Cash Flow}}$$

A = financial scoring is given by the table below

Payback period based on NPV	Financial scoring value
Payback period < 1 year	10 + 10 points bonus
1< Payback period <2 years	9
2< Payback period <3 years	8
3< Payback period <4 years	7
4< Payback period <6 years	6
6< Payback period <8 years	5
8< Payback period <10 years	4
10< Payback period <12 years	3
12< Payback period <14 years	2
15< Payback period	1

Sustainability Scoring

B = sustainability scoring is given by the average weight calculated for all sustainability criteria independently

There are many sustainability criteria:

- Emissions (tCO2eq): Scope 1,2 & 3
- Energy: Energy consumption (kWh)
- Water: water consumption (m3)
- Waste: waste generation (t)
- Food Safety: % production volume from certified sites
- Biodiversity: Number of species in the IUCN Red List and national conservation list species
- Supplier environmental assessment: number of suppliers screened using environmental criteria.
- Food loss: total weight (t) and food loss percentage (%)

The criteria are Weighted (%)

- The weight amongst each sustainability criteria is the same at this stage.
- Note: Weights can be discussed with the MLF by defining the **ranking** and the **rating**

Emissions(tCO2eq)	scoring value
80 and below	10
81 – 120	9
121 – 160	8
161 – 200	7
201 – 240	6
241 – 280	5
281 – 320	4
321 – 360	3
361 – 400	2
401 and above	1

Energy (kWh)	scoring value
8000 and below	10
8001 - 11000	9
11001 - 14000	8
14001 - 17000	7
17001 - 20000	6
20001 - 23000	5
23001 - 26000	4
26001 - 29000	3
29001 - 32000	2
32001 and above	1

Water (m3)	scoring value
50 and below	10
51 - 70	9
71 - 90	8
91 - 110	7
111 - 130	6
131 - 150	5
151 - 170	4
171 - 190	3
191 - 210	2
211 and above	1

Waste (t)	scoring value
2 and below	10
2.1 - 2.5	9
2.6 - 3	8
3.1 - 3.5	7
3.6 - 4	6
4.1 - 4.5	5
4.6 - 5	4
5.1 - 5.5	3
5.6 - 6	2
6.1 and above	1

Food Safety (%)	scoring value
95 - 100	10
90 - 94	9
85 - 89	8
80 - 84	7
75 - 79	6
70 - 74	5
65 - 69	4
60 - 64	3
55 - 59	2
50 - 54	1

Biodiversity (n)	scoring value
0-10	10
11-15	9
16 - 20	8
21 - 25	7
26 - 30	6
31 - 35	5
36 - 40	4
41 - 45	3
46 - 50	2
51 and above	1

Supplier Environmental Assessment (n)	scoring value
10 and below	1
11-15	2
16 - 20	3
21 - 25	4
26 - 30	5
31 - 35	6
36 - 40	7
41 - 45	8
46 - 50	9
51 and above	10

Food Loss (%)	scoring value
0 - 2	10
2.1 - 4	9
4.1 - 6	8
6.1 - 8	7
8.1 - 10	6
10.1 - 12	5
12.1 - 14	4
14.1 - 16	3
16.1 - 18	2
18.1 and above	1

SAPinsider

Operational Risk and Health and Safety Scoring

C = Occupational Health & Safety scoring is given by the table

Severity	Health & Safety scoring value
100%	10
90%	9
80%	8
70%	7
60%	6
50%	5
40%	4
30%	3
20%	2
10%	1

Operational Risk Scoring

D = Operational risk scoring is given by the severity score calculated based on the below table TBD

We are managing 5 risks type:

- Environmental risk
- Financial risk
- Safety risk
- Security risk
- Operational risk

For each project you have to enter

- the risk likelihood
- the risk consequence (CAD)

Risk Severity	Risk scoring value
< 5 000k CAD	10 + 10 points bonus
2000k <Severity< 5000k	9
1600k <Severity< 2000k	8
1200k <Severity< 1600k	7
800k <Severity< 1200k	6
600k <Severity< 800k	5
400k <Severity< 600k	4
200k <Severity< 400k	3
100k <Severity< 200k	2
Severity< 100k	1

Risk likelihood (risk level)	(A)	• 1/1000 = Low • 1/100 = Medium • 1/10 = High • 1/2 = very high • 1/1 = Recognized

Thank you

Richard Dampf, Managing Director
Head of Americas Presales
msg global solutions, Inc.

msg global solutions, Inc.
506 Carnegie Center way, Suite 401
Princeton, N.J. 08540

203-615-4932 Cell
Richard.Dampf@msg-global.com

SAP Gold Partner

SAP Pinnacle Awards 2023 Winner

msg global

Please remember to complete your session evaluation.

Where to Find More Information

SAP Profitability and Performance Management
https://www.msg-global.com/sap-profitability-and-performance-management

SAP Profitability and Performance Management
https://help.sap.com/docs/SAP_PROFITABILITY_PERFORMANCE_MANAGEMENT/9db9a49db52c406481cb8e24bd98a40d/6800097e837b4f53bca40d77215700b0.html

SAPinsider

SAPinsider.org

PO Box 982Hampstead, NH 03841
Copyright © 2024 Wellesley Information Services.
All rights reserved.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. All other product and service names mentioned are the trademarks of their respective companies. Wellesley Information Services is neither owned nor controlled by SAP SE.

SAPinsider comprises the largest and fastest growing SAP membership group with more than 800,000 members worldwide.