License Security Analysis & Remediation Project

Microsoft Solutions Partner

Avantiico®



License Optimization Model – Methodology and User Guide

Prepared by Avantiico Licensing Team

Date: 2026-10-14

OTHER CLIENTS LIKED THESE PRODUCTS

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EXECUTIVE SUMMARY

Dynamics 365 Finance and Supply Chain licensing is a security question, not a procurement checkbox: the license each user needs is decided by the access their security roles grant. Our mission is to give every client a license number they can defend: compliant with Microsoft's rules, and no higher than real use requires. Our Evidence-First method has three stages:

- establish who really uses the system;
- find the exact roles, duties and privileges that drive each license;
- redesign security from real usage across full business cycles, then implement it safely through testing and a planned go-live.

Clients get compliance before Microsoft's per-user license checks, a right-sized subscription, and a tighter security model. In our published case studies, license spend fell by 25 to 44%.

Where the License Optimization Model fits

The License Optimization Model is a small but essential step on this journey. It works with the client's environment exactly as it is today: no change to security roles and no change to which users hold which roles. It starts from the licenses Dynamics 365 already requires for each user and the licenses the client already owns. From those, it calculates how many licenses the client must buy, and how to lower the bill right away:

- by choosing each user's Base and Attach licenses deliberately;
- by meeting Microsoft's minimum purchase quantities with licenses the client already pays for;
- by reclassifying seats nobody needs.

Even with everything kept as is, the subscription can be optimized now. The larger savings from security redesign follow in the later stages, and the same model then recalculates the bill.

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INTRODUCTION

Microsoft now checks Dynamics 365 Finance and Operations licenses user by user. A user whose security roles require a license they do not hold is reported as unlicensed and cannot sign in once license validation starts. Becoming compliant is not simply a matter of buying what is missing: Microsoft's rules decide what the company actually pays. Each user has one Base license and much cheaper Attach licenses for further applications; most applications must be held in at least 20 seats once they are used; and licenses the company already owns can often be reclassified to another SKU instead of buying new ones.

The License Optimization Model (the Excel workbook “D365 Finance and Operations License Optimization.xlsx”) combines the license each user needs, as calculated by Dynamics 365, with the current subscription, and applies these rules to find a low-cost compliant position. For decision makers it provides:

- The monthly bill today, until renewal and after renewal (License Bill Summary).
- What to buy and its estimated cost, after minimums and the reuse of owned licenses.
- Which owned licenses to reclassify, move by move, with the monthly cost change of each move.
- Which license to assign to each user, so the company stays compliant at the lower bill.

Choosing each user's Base license deliberately can lower the bill substantially. In the example in section “Microsoft out-of-the-box versus the optimized bill: an example”, giving six Commerce users a Base license the company needs anyway, instead of triggering the 20-seat Commerce minimum, lowers the monthly bill from $11,400 to $8,640 while every user keeps every application they need.

Before acting on the results, confirm three points with the Microsoft partner: which reclassifications the agreement allows and whether during the term or only at renewal; whether Attach licenses count toward product minimums; and the contract prices. The workbook refreshes in seconds for about 1,000 users, so it can be re-run after every change to security roles or the subscription.

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HOW TO USE IT

“D365 Finance and Operations License Optimization” workbook: how the license purchase optimization works and how to use it

This guide explains what the “D365 Finance and Operations License Optimization” Excel workbook does, the Microsoft licensing rules behind it, where its input data comes from, what every column of every visible table means, and how to refresh it. Read sections “Licensing rules the workbook uses” and “The optimization step by step” to understand the method, section “Input data” to prepare the data, sections “The visible tables and their columns” and “Reading the results” to read the results, and section “How to refresh the workbook” to run a refresh.

At a glance

Question the workbook answers: given the licenses each user needs and the licenses the company already owns, what is the cheapest way to become compliant: which licenses to reassign, which to reclassify to another SKU, and which to buy?

Inputs: two tables you fill in: Subscription (licenses owned, Microsoft minimums, prices) and User_SKU (licenses each user needs, from Dynamics 365).

Outputs: seven tables calculated by Power Query: Users_SKU, User Assigned Licenses, License Report, License Report Recommendations, License Reclassification Required, License Bill Summary and License Assignment Comparison.

Refresh: Data > Refresh All. It takes seconds for about 1,000 users.

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WHAT THE WORKBOOK DOES

Microsoft licenses Dynamics 365 Finance and Operations apps per user. The license a user needs is decided by the security roles assigned to that user: every role is mapped to the license that covers its menu items. Dynamics 365 calculates this requirement itself and stores it per user; the Power Platform admin center (PPAC) shows the same requirement in its license reports.

Knowing what each user needs is only half of the purchasing decision. Microsoft's commercial rules also decide what the company must actually pay for:

- Each user has exactly one Base license (the highest-priced one) and gets every other full application as a much cheaper Attach license.
- Most full application SKUs have a minimum purchase quantity. A company that needs 6 Commerce licenses must still buy 20.
- Licenses the company already owns on one SKU can often be reclassified to another SKU instead of buying new ones.

The workbook combines the per-user requirement with these rules and finds the lowest purchase cost. It runs in three stages:

Stage	What happens	Where you see it
1. Requirement	Reads the licenses each user needs (from Dynamics 365) and applies Microsoft's out-of-the-box Base/Attach rule.	User_SKU (input), Users_SKU
2. Base license choice	Chooses, per user, the Base license that gives the lowest total purchase cost for the whole company, taking minimum quantities and owned licenses into account.	User Assigned Licenses, License Report
3. Purchase optimization	Applies the minimums, then uses owned licenses that are not needed to cover shortages by reclassification. Only the remaining shortage is bought.	License Report Recommendations, License Reclassification Required

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LICENSING RULES THE WORKBOOK USES

Every full user needs one Base license, the highest-priced license they hold; each further full application is a $30 Attach license.

A product in use must be held at Microsoft's minimum (20 seats for most applications, 10 for Premium, 5 for Human Resources) for the whole term, so a minimum becomes a monthly bill.

The number to buy differs from the number needed because of the Base/Attach choice, minimums, licenses already owned, reclassification and Premium seats.

Reclassification moves owned seats nobody needs to SKUs that are short, in five steps; every move is a proposal that depends on the customer's agreement.

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Base and Attach licenses

Microsoft's Product Terms require that every full user has a Base license, that the Base license is the highest-priced license assigned to the user, and that Attach licenses are assigned only to users who have a qualifying Base license. In practice:

- A user who needs Finance and Supply Chain Management (SCM) pays for one Base license ($210) and one Attach license ($30), not for two full licenses ($420).
- Finance, SCM and Commerce cost the same ($210), so any of them can be the Base. Project Operations and Human Resources ($135) can be Base only when the user has no $210 application.
- Operations – Activity ($50) and Team Members ($8) are not full applications and have no Attach version. A user who needs a full application does not need Activity or Team Members as well; a user who needs Activity does not need Team Members as well.

Indicative US list prices per user per month used in the workbook (validate against your agreement):

License	Typical use	Price
Finance Premium	Full finance and accounting operations & AI features	$300/user
Finance	Full finance and accounting operations	$210/user
Supply Chain Management (SCM) Premium	Procurement, manufacturing, inventory and logistics & AI features	$300/user
Supply Chain Management (SCM)	Procurement, manufacturing, inventory and logistics	$210/user
Commerce	Retail, point-of-sale and omnichannel operations	$210/user
Project Operations	Project planning, management and costing	$135/user
Human Resources (HR)	HR administration and workforce management	$135/user
Operations – Activity	Selected operational tasks and approvals	$50/user
Team Members	Inquiry and limited transactional activities	$8/user
Operations – Device	Eligible shared warehouse / Shop-floor / Point-of-Sale devices	$85/device
HR Self Service	Eligible employee and manager self-service	$4/user
Attach License	Supplemental application entitlement	$30/user

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Minimum purchase requirements

Microsoft's Product Terms (section "Purchasing Minimums – All Programs") set a minimum quantity for several Dynamics 365 products, and "these minimum purchases must be maintained through agreement term":

Product	Minimum quantity
Dynamics 365 Finance	20
Dynamics 365 Finance Premium	10
Dynamics 365 Supply Chain Management	20
Dynamics 365 Supply Chain Management Premium	10
Dynamics 365 Commerce	20
Dynamics 365 Project Operations	20
Dynamics 365 Human Resources	5

Operations – Activity and Team Members have no minimum. The minimum applies to a product only when the company uses it: if nobody needs Commerce, nothing has to be bought. These values are in the Min column of the Subscription table.

The Product Terms list minimums per product and do not say how Attach licenses count. The model assumes that Attach licenses have no minimum and do not trigger their product's minimum; confirm this with the Microsoft partner, because the savings in the example depend on it.

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Why a minimum turns into a "minimum billing amount"

A minimum is a commitment in money, not only in seats. If 6 users need Commerce, the company is billed for 20 Commerce licenses: 20 × $210 = $4,200 per month, although the 6 users would cost $1,260.

The 14 extra seats are paid either way. The optimization therefore tries to avoid triggering the minimum or to fill it usefully (by choosing other users' Base licenses, section “Base license choice”), or to fill it with licenses the company already pays for elsewhere (reclassification, see section “Reclassification”). Filling a minimum by reclassification avoids a purchase, but the idle seats are still billed; section “From requirement to purchase: an example” shows how to check this.

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Why the required number differs from the number to purchase

The number of licenses users need on a SKU and the number the company must buy on that SKU are often different. Reasons, in the order the workbook applies them:

Reason	Effect	Example
Base/Attach choice	Which SKU a user consumes as Base and which as Attach can be chosen (section “Base license choice”). The optimized count per SKU (Recalculated Required) can differ from Microsoft's out-of-the-box count (Required).	6 Commerce users get an SCM Base plus a Commerce Attach: SCM rises by 6, Commerce Base falls to 0.
Minimum quantity	If a SKU is needed at all, the company must own at least its minimum.	6 needed, minimum 20: Qty to Own is 20.
Licenses already owned	Owned seats reduce the purchase.	Need 25, own 5: buy at most 20.
Reclassification	Owned seats on SKUs that are not needed can be moved to SKUs that are short.	30 unused Finance seats cover 20 Commerce and 10 SCM seats.
Premium licenses	Owned Premium seats that are not needed cover the standard SKU of the same module.	10 unused SCM Premium seats reduce the SCM purchase by 10.

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Reclassification

Reclassification means changing the SKU of licenses the company already has on its subscription: for example, turning 10 Operations – Activity seats that nobody needs into 10 Supply Chain Management seats. Depending on the agreement, this is done at renewal or anniversary (reduce one SKU, increase another), with Microsoft step-up licenses (for example from Operations – Activity to a full application), or through the Microsoft partner. Whether and when it is allowed depends on the customer's agreement, so every move in the workbook is a proposal to confirm with procurement or the partner.

Reclassification matters most for minimums. Without it, a company with surplus licenses on one SKU still buys 20 new seats of another SKU to reach that SKU's minimum. With it, the surplus is moved and the minimum is met with seats the company is already paying for.

The workbook reclassifies in this order, always using what is left after the previous step:

Step	Name in the workbook	What it does
0	Premium To Standard	Extra Premium seats cover the need of their own standard SKU (SCM Premium → SCM, Finance Premium → Finance), although Premium costs more. Repeated after steps 2 and 3.
1	Extra Current	Seats not needed cover shortages of another SKU in the same commercial group.
2	Min Completion	Inside the same group, seats from SKUs whose own need is met complete another SKU's minimum. The donor can give more than its extra seats; its own shortfall is then bought on the donor SKU.
3	Cheaper Or Equal To More Expensive Min	Across groups, seats from cheaper or equally priced SKUs complete remaining minimums. As in step 2, the donor can give more than its extra seats.
4	Cheaper Or Equal To More Expensive Open Need	Remaining extra seats cover any remaining shortage at an equal or higher price.

Commercial groups: (1) Finance, Supply Chain Management and Commerce; (2) Project Operations and Human Resources; (3) all Attach SKUs. Operations – Activity and Team Members belong to no group and take part only in steps 3 and 4. Premium SKUs take part in step 0. In steps 3 and 4 a seat only moves to a SKU with the same or a higher price, and when several SKUs can donate, each move takes the one with the lowest price, then the most seats left, then the SKU name. In steps 1 and 2 the donor with the most seats left goes first.

Because steps 2 and 3 can take seats a donor needs itself, a SKU can show a Qty to Purchase although the company owns more seats of it than it needs: the seats moved to complete another SKU's minimum are bought back on the donor SKU.

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What the purchase estimate does not include

Estimated Purchase Cost counts only new seats (Qty to Purchase × Price). A reclassified seat is billed at the price of its new SKU from then on, so moving an Activity seat ($50) to SCM ($210) also raises the monthly bill by $160. License Bill Summary (section “License Bill Summary”) shows the full monthly bill before and after.

Prices are list prices; discounts, currency and agreement terms are not applied.

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THE OPTIMIZATION STEP BY STEP

Microsoft's default makes each user's highest-priority license the Base (Users_SKU). The model instead chooses each user's Base to lower the company's purchase cost (User Assigned Licenses).

Every user keeps every application they need. Some users get an added Base license; PPAC reports them as over-licensed, and that license must not be removed.

Minimums are applied, owned seats are used and unneeded seats are reclassified before anything is bought.

The model minimizes new purchases, not the monthly bill: always check License Bill Summary.

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Microsoft's out-of-the-box calculation

Table: **User_SKU** and **Users_SKU**

Dynamics 365 stores, per user, every license required by the user's security roles. The User_SKU table holds this list (one row per user and SKU). The Users_SKU query applies Microsoft's out-of-the-box rule to it:

- Covered requirements are removed (a full application covers Activity and Team Members; Activity covers Team Members).
- The Base license is the first license in a fixed order that follows price: SCM, Finance, Commerce ($210), Project Operations, Human Resources ($135), Operations – Activity, Team Members. Microsoft only requires the Base to be the highest-priced license; the order among same-priced licenses is the workbook's convention.
- Every other full application becomes an Attach license.

Counting these per SKU gives the out-of-the-box requirement: the Required D365 Licenses column of License Report Recommendations. PPAC shows the same per-user requirement, per user and license, without splitting it into Base and Attach.

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Base license choice

Sheet: **User Assigned Licenses**

The out-of-the-box rule decides the Base license per user without looking at the bill. The optimization chooses each user's Base license so that the company's purchase cost is lowest, while every user still has every license they need:

1. Start with a cost-based choice among the licenses each user needs (for a user who needs Finance and SCM, Finance or SCM as Base).
2. Allowed alternatives. A user who needs Finance, SCM or Commerce may take any of these three as Base (all $210), even one the user does not need (an added Base); the needed applications then become Attach licenses. A user who needs only Project Operations or Human Resources may take one of these, or a $210 application as Base. Activity and Team Members users keep their license.
3. Score each alternative by the purchase cost of the whole company after minimums and reclassification. Ties are broken by less minimum waste, then by being closer to the licenses already owned, then by fewer added Base licenses.
4. Fix SKUs below their minimum. If a Base SKU is used by fewer users than its minimum, try moving those users to another Base.
5. Improve group by group (users with the same combination of licenses) until no change lowers the cost.
6. Keep the result only if it is cheaper than the starting allocation; otherwise keep the starting allocation.

The result per user is in User Assigned Licenses, and the optimized count per SKU is the Recalculated Required D365 Licenses column (and the Required D365 Licenses column of License Report).

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Microsoft out-of-the-box versus the optimized bill: an example

Example (invented data, calculated with the workbook): 6 users need only Commerce, and 30 users need Finance and Supply Chain Management. The company owns no licenses yet.

User	Needs (User_SKU)	Out of the box (Users_SKU)	Optimized (User Assigned Licenses)
C01–C06 (6 users)	Commerce	Commerce – Base	Supply Chain Management – Base (added) Commerce – Attach
F01–F30 (30 users)	Finance, Supply Chain Management	Supply Chain Management – Base Finance – Attach	Supply Chain Management – Base Finance – Attach

SKU	Out of the box: seats to buy	Cost	Optimized: seats to buy	Cost
Supply Chain Management	30	$6,300	36	$7,560
Finance Attach	30	$900	30	$900
Commerce	6 needed, minimum 20	$4,200	0	$0
Commerce Attach	0	$0	6	$180
Total per month		**$11,400**		**$8,640**

Out of the box, the 6 Commerce users trigger the Commerce minimum: 20 seats are billed for 6 users. Optimized, they receive an SCM Base license (SCM is needed anyway, so no minimum is triggered) and Commerce as an Attach license, which saves $2,760 per month. Every user still has every application they need.

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How to compare the two views in the workbook

User_SKU / Users_SKU = what each user needs and how Microsoft assigns Base and Attach by default. Use it to check compliance against PPAC.

User Assigned Licenses = how to assign licenses to the same users to get the optimized bill. Use it to assign licenses in the Microsoft 365 admin center.

A row in User Assigned Licenses whose license does not appear for that user in User_SKU is an added Base license: the user does not need that application, but holding it as Base lowers the company's bill.

PPAC will report users with an added Base as over-licensed. Do not remove that license: without it the user's Attach license has no qualifying Base, and the product's minimum applies again.

The saving depends on the Attach-minimum assumption in section “Minimum purchase requirements”.

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From requirement to purchase: an example

Example (invented data, calculated with the workbook): 25 users need Finance and SCM, 6 users need Commerce, 40 users need Operations – Activity. The company owns 30 Finance, 5 SCM and 60 Operations – Activity licenses. Here the optimization keeps Microsoft's Base choice (SCM Base, Finance Attach), because no other choice has a lower Estimated Purchase Cost.

SKU	Current	Min	Recalculated Required	Qty to Own	Reclass In	Reclass Out	Extra after	Qty to Purchase	Cost
Supply Chain Management	5	20	25	25	20	0	0	0	$0
Finance	30	20	0	0	0	30	0	0	$0
Finance Attach	0	0	25	25	0	0	0	25	$750
Commerce	0	20	6	20	20	0	0	0	$0
Operations – Activity	60	0	40	40	0	10	10	0	$0
Total									**$750**

Moves proposed (License Reclassification Required): 20 Finance → Commerce, 10 Finance → Supply Chain Management, 10 Operations – Activity → Supply Chain Management. Only the 25 Finance Attach seats are new ($750). The monthly subscription, before and after:

Scenario	Monthly bill	How it is calculated
Today	$10,350	30 Finance × $210 + 5 SCM × $210 + 60 Activity × $50
This plan, all moves made now	$12,700	Today + $750 new Finance Attach seats + $1,600 for the 10 Activity seats now billed as SCM (10 × $160); Finance moves to Commerce and SCM at the same price
This plan, moves made only at renewal	$19,500	Today plus $9,150 bought now (20 SCM, 20 Commerce to reach the minimum, 25 Finance Attach); the 30 Finance and 20 Activity seats stay billed until renewal
After dropping the 10 extra Activity seats at renewal	$12,200	Qty to Own × Price: 25 SCM, 25 Finance Attach, 20 Commerce, 40 Activity

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If the moves can be made only at renewal, do not follow this plan as it is. A different assignment needs no moves: Finance as Base for the 25 Finance and SCM users (SCM Attach, $750) and for the 6 Commerce users (5 spare Finance seats plus 1 new one, and Commerce Attach, $390). It costs about $11,490 per month until renewal, which is also below the $12,700 of this plan with all moves made now, and $9,440 after renewal instead of $12,200. The optimization minimizes new purchases, so it does not choose this alternative; License Bill Summary shows the bills of the proposed plan (section “License Bill Summary”).

Check the bill, not only the purchase

The optimization minimizes new purchases (Estimated Purchase Cost). Seats moved by reclassification count as free, even when they only fill a minimum. In this example, 20 Finance seats fill the Commerce minimum for 6 Commerce users, so 14 Commerce seats stay idle but billed.

The alternative from section “Microsoft out-of-the-box versus the optimized bill: an example” (SCM Base plus Commerce Attach for the 6 Commerce users, with 26 of the 30 Finance seats reclassified to SCM) costs more to buy ($930 instead of $750) but gives a lower bill: $11,280 instead of $12,700 right after the changes, and $9,440 instead of $12,200 after the unused seats are dropped at renewal.

When the company owns many unused seats, compare Qty to Own × Price for the alternatives before deciding, not only the purchase cost.

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Without reclassification: what the Base license choice alone saves

Microsoft requires each full user's Base license to be the highest-priced license, but Finance, Supply Chain Management and Commerce all cost $210, and Microsoft does not say which of them is the Base. The Users_SKU sheet follows a fixed order (SCM first): the default assignment. Assigning licenses that way, without looking at what the company already owns, can force purchases even when owned licenses would cover the same users. Choosing each user's Base deliberately lowers the bill with no change to security roles and no reclassification.

At list prices and before minimums, the licenses users need cost the same in every plan ($142,015 a month here): each user still gets one Base license and the same applications. What changes is how well the plan fits the licenses the company already owns, and whether it triggers a minimum: the Microsoft default ends up $2,940 higher after renewal only because its 6 Commerce Base users trigger the Commerce minimum of 20.

Example: the company from section “Example: one company's report” owns 100 Finance, 60 SCM, 160 SCM Attach and 1,200 Operations – Activity licenses. If it keeps every license it owns and buys only what is missing (sheet License Assignment Comparison), the plans compare as follows (per month, list prices):

Plan	Cost of licenses to buy	Bill until renewal	Bill after renewal
Microsoft default assignment	$98,355	$196,755	$144,955
Proposed plan, moves made only at renewal	$91,665	$190,065	$142,015
Best assignment without moves	$79,065	$177,465	$142,015
For comparison: proposed plan, all moves made now	$21,240 new seats + $42,825 for moved seats	$162,465	$142,015

- The Microsoft default makes 340 users SCM Base users, but the company owns only 60 SCM Base licenses: it buys 280 SCM licenses while 55 Finance and all 160 SCM Attach licenses stay idle. Its 6 Commerce Base users also trigger the Commerce minimum of 20: 14 idle Commerce seats, $2,940 a month. Without the minimum the default would cost $95,415 to buy and $193,815 until renewal.
- The best assignment without moves uses every owned Finance, SCM and SCM Attach license (191 Finance Base, 180 SCM Base and 160 SCM Attach users); only the 709 spare Activity seats stay idle until renewal.

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- Against the Microsoft default it saves $19,290 a month until renewal ($196,755 – $177,465), without touching security and without reclassifying anything. With reclassification (all moves made now) the bill until renewal is $162,465.
- In this example the best assignment without moves also reaches the same bill after renewal ($142,015) by only dropping the 709 idle Activity seats at renewal: no reclassification is needed at all.

The proposed plan is built assuming the moves can be made. If they can only be made at renewal, assign licenses as in User Assigned Licenses No Moves until renewal. The best assignment without moves is the cheapest the model's search finds; it is not guaranteed to be the absolute minimum.

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INPUT DATA

Subscription: owned seats per SKU (Microsoft 365 admin center, cross-checked in PPAC), Microsoft minimums (Product Terms) and prices (list or contract).

PPAC User License Consumption shows the required, assigned and missing licenses per user and product.

User_SKU: UserId and SkuName exported from the Dynamics 365 table LicensingUserLicensesByRole.

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Subscription table

Sheet: **Subscription**

One row per SKU the company can own. Keep the rows for SKUs the company does not own (leave Current empty). Source: PPAC D365F&O License report.

Column	Meaning	Where to find it
SKU	SKU name. Standard SKUs must be spelled exactly as the SkuName values in Dynamics 365 (for example "Supply Chain Management", "Operations - Activity"). Attach SKUs are the standard name plus " Attach"; Premium SKUs the standard name plus " Premium".	Fixed list; change only if Microsoft renames a SKU.
License	License group that links the SKU to the user data: SCM, Finance, Commerce, Project, HR, Activity or Team Members. The Base, Attach and Premium rows of one product share the same value.	Fixed list.
Current D365 Licenses	Licenses the company owns (purchased) on this SKU. Empty means 0.	Microsoft 365 admin center (Billing > Your products, or Licenses): purchased quantity per SKU, including Premium and Attach SKUs. Cross-check with the PPAC product cards (section “How to read the PPAC license report”).
Min	Microsoft minimum purchase quantity. Empty or 0 means no minimum.	Microsoft Product Terms (section “Minimum purchase requirements”) or the customer's agreement.
Price	Price per user per month.	Microsoft list price or the customer's contracted price.

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How to read the PPAC license report

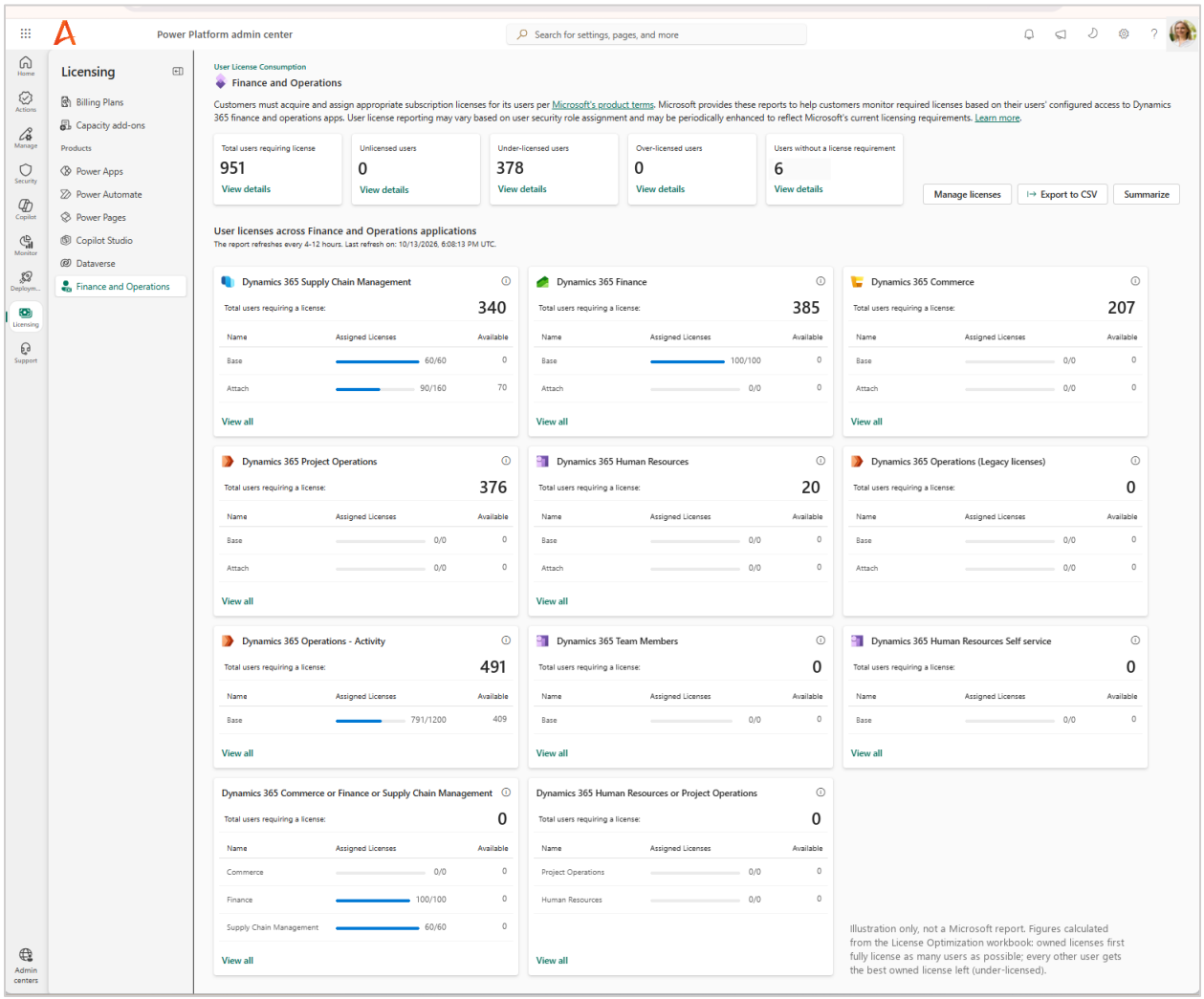
The Power Platform admin center (PPAC) has a User License Consumption report for finance and operations apps. It is available for cloud-hosted environments connected to Microsoft Entra ID (not on-premises).

Open it:

1. Sign in to https://admin.powerplatform.microsoft.com with an admin role (for example Global Administrator, Dynamics 365 Administrator or Power Platform Administrator).
2. Select Licensing in the left menu.
3. Under Products, select Finance and Operations to open User License Consumption.

The report refreshes every 4 to 12 hours; the time of the last refresh is shown at the top.

Example: one company's report



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The company owns 100 Finance, 60 Supply Chain Management (SCM), 160 SCM Attach and 1,200 Operations – Activity licenses. The security roles of 951 users require a license.

Step 1: the top tiles show whether you are compliant

Tile	Example	What it means
Total users requiring license	951	Users whose security roles require a license. Should match the number of different UserId values in User_SKU; if it does not, check sandbox-only users, disabled users and when each source was refreshed.
Unlicensed users	0	Users with no license assigned. They cannot sign in once Microsoft's license validation starts.
Under-licensed users	378	Users with a license, but not all the licenses their roles require. Here: everyone who needs Project Operations, Commerce or Human Resources, which the company does not own.
Over-licensed users	0	Users with more than they need. Usually a saving, except users who hold an added Base on purpose (see “Microsoft out-of-the-box versus the optimized bill: an example”).
Users without a license requirement	6	Users whose roles are excluded from license requirements, for example service accounts.

951 − 378 − 0 = 573 users are fully licensed. The other 378 are the compliance gap that the workbook closes.

Step 2: each product card shows need, ownership and assignment

Take the Supply Chain Management card:

- Total users requiring a license: 340. 340 users need SCM, either as their Base or as an Attach license.
- Base 60/60, Available 0. The company owns 60 SCM Base licenses, and all of them are assigned.
- Attach 90/160, Available 70. It owns 160 SCM Attach licenses. 90 are assigned to users whose Base is Finance; 70 are unused.
- So 150 of the 340 SCM users have SCM, and at least 190 do not (exactly 190 if every seat sits with a user who needs it). Owned seats sit idle while users go short, because an Attach license can only be assigned on top of a qualifying Base.

How to read every card:

- a/b means licenses assigned / licenses purchased, and Available = b − a.

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- Total users requiring a license counts every user who needs that product, as Base or Attach. A user who needs three products appears on three cards, so the cards add up to more than 951. Here: 340 + 385 + 207 + 376 + 20 + 491 = 1,819, one per user and license, which is the number of rows on the Users_SKU sheet.
- The two cards at the bottom count users whose roles can be met by any one of several products, and show the assigned licenses of those products. They show 0 users here.

Product	Users requiring	Base	Attach	What it tells you
Supply Chain Management	340	60/60 (0)	90/160 (70)	At least 190 SCM users lack SCM; 70 Attach seats idle
Finance	385	100/100 (0)	0/0	At least 285 Finance users lack Finance; no Finance Attach owned
Commerce	207	0/0	0/0	Nothing owned
Project Operations	376	0/0	0/0	Nothing owned
Human Resources	20	0/0	0/0	Nothing owned
Operations – Activity	491	791/1,200 (409)	–	491 need Activity; 300 more users hold Activity as a stopgap; 409 seats idle

Step 3: take the numbers into the workbook

PPAC figure	Where it goes in the workbook	Example
Purchased (b in a/b)	Subscription, Current D365 Licenses (cross-check in the Microsoft 365 admin center)	Finance 100, SCM 60, SCM Attach 160, Activity 1,200
Total users requiring license	Should match the different UserId values in User_SKU	951
Users requiring, per product	Users per license on the Users_SKU sheet	340 SCM, 385 Finance, …
Assigned (a in a/b)	Not used: the workbook works from what users need, not what is assigned today	–

PPAC reports the requirement and the assignment. It does not decide which license should be each user's Base, apply Microsoft's minimums, or reuse owned seats. That is what the workbook adds.

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Step 4: what the workbook makes of this report

- Reclassify: 210 Activity seats to Finance, 21 to Commerce, 69 to Project Operations, and 60 SCM seats to Finance. Every SCM user gets SCM as an Attach license, on a Finance or Commerce Base.
- Buy: 708 Attach licenses (180 SCM, 15 Finance, 307 Project Operations, 186 Commerce, 20 Human Resources), for $21,240 a month.
- Bill (from License Bill Summary): today $98,400 a month; until renewal $162,465 if all moves are made now, or $190,065 if they can only be made at renewal; after renewal $142,015, once the 409 idle Activity seats are dropped.

If licenses are then assigned exactly as in User Assigned Licenses, and security roles have not changed since the export, the PPAC report should show 0 unlicensed, 0 under-licensed and 0 over-licensed users.

Reference: the fields of the report

Top-level metrics:

Metric	Meaning
Total users requiring license	All users, across connected finance and operations environments, whose security roles require a license.
Unlicensed users	Users whose security roles require a license but who have no license assigned in the Microsoft 365 admin center. These users cannot sign in once license validation starts.
Under-licensed users	Users with an assigned license that does not meet their requirement (for example, Activity assigned but SCM required, or a missing Attach license).
Over-licensed users	Users whose assigned licenses exceed their requirement. Usually a cost-saving opportunity, except users who hold an added Base on purpose (section “Microsoft out-of-the-box versus the optimized bill: an example”).
Users without a license requirement	Users whose security roles are excluded from license requirements.

Product cards (one per product: Commerce, Finance, Human Resources, Project Operations, Team Members, Operations – Activity, Operations (legacy), Supply Chain Management):

Field	Meaning	Use in the workbook
Total users requiring a license	Users who need this product.	Cross-check with Users_SKU.

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Field	Meaning	Use in the workbook
Base licenses assigned	Base licenses of the product assigned to users.	Assigned + available should match the purchased Base licenses (cross-check of Current D365 Licenses).
Base licenses available to assign	Owned but unassigned Base licenses.	
Attach licenses assigned	Attach licenses of the product assigned to users.	Assigned + available should match the purchased Attach licenses.
Attach licenses available to assign	Owned but unassigned Attach licenses.	

Premium SKUs are not listed as separate products; take all purchased quantities from the Microsoft 365 admin center and use the cards as a cross-check.

User details (select view details on a metric card, or View all on a product card):

Column	Meaning
Email/User ID	The user's Microsoft Entra ID identity.
Required license	License required by the user's security roles. Select it to see Required license details per environment: Environment name, Environment type (Production or Sandbox), Security role and the Required license each role triggers.
Assigned license in M365	Finance and operations licenses assigned to the user in the Microsoft 365 admin center.
Missing licenses	Required licenses not assigned to the user.

For a role, the report can also show the menu items behind the requirement (Securable Type, AOT Name, Access Level Read or Write, Entitled, Not Entitled, Not Required).

Export to CSV: the standard report has TenantId, UserEmail, UserId, RequiredLicense(s), AssignedLicense(s), MissingLicense(s) and RefreshedOn. The detailed report has one row per user, environment and security role: TenantId, EnvironmentId, EnvironmentName, EnvironmentType, UserEmail, UserId, SecurityRole, RequiredLicense(s), AssignedLicense(s) and RefreshedOn.

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How PPAC relates to the workbook

PPAC's Required license is based on the same role-to-license mapping as the Dynamics 365 table used for User_SKU (section “User_SKU table”). Counts can still differ: PPAC combines all connected environments, production and sandbox, while User_SKU is exported from one environment (normally production). Use the Microsoft 365 admin center and PPAC for the licenses owned and assigned, and the Dynamics 365 table for the licenses required.

Before relying on the numbers, check unexpected requirements in PPAC: a single privilege in a role can raise a user from Team Members or Activity to a full application license.

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User_SKU table

Sheet: **LicensingUserLicensesByRole**

The table lists the licenses each user needs, taken from Dynamics 365. Open the table browser in the production environment (you need a role that can open the table browser, normally System administrator):

https://XXXXX.operations.dynamics.com/?mi=SysTableBrowser&TableName=LicensingUserLicensesByRole

where XXXXX is the company's Dynamics 365 domain. The table lists the licenses required by each user's security roles, with columns such as UserId, SecurityRoleName, SkuName and RequiredUserLicense. The workbook uses only two:

Column	Meaning
UserId	The Dynamics 365 user ID.
SkuName	The SKU the user needs because of one of their security roles (for example Finance, Supply Chain Management, Operations - Activity, Team Members).

Prepare the data:

1. Export the table (Open in Microsoft Office > Export to Excel on the page, or select all rows in the grid and copy them). Check that the number of exported rows equals the number of rows in the table browser; large tables can be cut off.
2. Keep only the UserId and SkuName columns.
3. Optionally keep the RequiredUserLicense column as well: rows where it is blank are then skipped.
4. Repeated UserId and SkuName pairs (one per security role) are fine: the workbook counts each pair once.
5. Every SkuName must have a row in the Subscription table with the same name and a License value. Otherwise the refresh stops with "Unknown SkuName" and lists the names (see section “How to refresh the workbook”).

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THE VISIBLE TABLES AND THEIR COLUMNS

Users_SKU: Microsoft's default Base and Attach per user. User Assigned Licenses: the optimized license to assign to each user.

License Report: required versus owned per SKU. License Report Recommendations: the purchase plan. License Reclassification Required: each move and its monthly cost change.

License Bill Summary: the monthly bill today, until renewal and after renewal; present it to decision makers.

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Users_SKU

Sheet: **Users_SKU**

Microsoft's out-of-the-box view: one row per user and required license, with Base or Attach decided by Microsoft's rule (section “Microsoft's out-of-the-box calculation”).

Column	Meaning and calculation
User	Dynamics 365 user ID (UserId from User_SKU).
License	License group required by the user (SCM, Finance, Commerce, Project, HR, Activity, Team Members), after covered requirements are removed (a full application covers Activity and Team Members).
License_Type	Base for the user's highest-priced license (ties: SCM, Finance, Commerce, Project, HR, Activity, Team Members); Attach for every other license.

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License Report

Sheet: **License Report**

Compares the optimized requirement with the current subscription, per SKU, before any reclassification. One row per SKU in a fixed order, plus a Total row.

Column	Meaning and calculation
idx	Display order.
SKU	SKU name. Device is listed with zeros because it is not part of the Subscription table.
Required D365 Licenses	Optimized requirement (Recalculated Required, section “Base license choice”), before minimums.
Current D365 Licenses	Owned licenses (Subscription table).
Delta	Required − Current. Positive: licenses missing; negative: licenses owned but not needed on this SKU.
Price	Price per user per month (Subscription table).
Required Amount	Required × Price.
Current Amount	Current × Price.
Non-compliance Amount	Delta × Price. Positive: monthly cost of the missing licenses; negative: monthly cost of licenses not needed on this SKU. The Total row sums the three amounts.

The amounts do not include minimums. In the example of section “From requirement to purchase: an example” the Total Non-compliance Amount is −$1,090 (the company pays $10,350 against $9,260 of need), yet SCM, Finance Attach and Commerce are short, and with the Commerce minimum the compliant subscription costs $12,200. Use License Report Recommendations for the purchase plan.

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License Report Recommendations

Sheet: **License Report Recommendations**

The purchase plan per SKU after minimums and reclassification (sections “Minimum purchase requirements” to “Reclassification”).

Column	Meaning and calculation
idx, SKU	Display order and SKU name.
Current D365 Licenses	Owned licenses.
Minimum License Purchase Requirements	Microsoft minimum (Min in the Subscription table).
Price	Price per user per month.
Required D365 Licenses	Microsoft's out-of-the-box requirement (Users_SKU counted per SKU).
Recalculated Required D365 Licenses	Optimized requirement after the Base license choice (User Assigned Licenses counted per SKU).
Qty to Own	0 if Recalculated Required is 0; otherwise the larger of Recalculated Required and the minimum.
Qty to Reclass In	Seats moved into this SKU from other SKUs.
Qty to Reclass Out	Seats moved from this SKU to other SKUs.
Extra after Reclass	Seats still not needed after reclassification: max(0, Current − Out + In − Qty to Own). Candidates to drop at renewal.
Qty to Purchase	New seats to buy: max(0, Qty to Own − (Current − Out + In)).
Estimated Purchase Cost	Qty to Purchase × Price. The Total row sums it.

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License Reclassification Required

Sheet: **License Reclassification Requir**

The list of moves behind Qty to Reclass In and Out, to review and action with procurement or the Microsoft partner. Moves of the same pair of SKUs in the same reclassification step are added together, so a pair can appear on two rows when two steps move seats between the same SKUs.

Column	Meaning
From SKU	SKU the seats move from.
To SKU	SKU the seats move to.
Qty Reclassified	Number of seats moved.
From Price	Price of the source SKU.
To Price	Price of the target SKU.
Monthly Cost Change	Qty Reclassified × (To Price − From Price): how much the monthly bill changes when these seats are billed at the new SKU's price. Negative for moves to a cheaper SKU (for example Premium to standard).
Suggestion	Plain-language instruction, for example "Reclassify 20 licenses from Finance to Commerce."

The query checks that its moves add up to Qty to Reclass In and Out; if they do not, the refresh stops with "Moves do not match Final_With_Anchor In/Out".

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License Bill Summary

Sheet: **License Bill Summary**

The monthly subscription bill before and after the plan. Estimated Purchase Cost counts only new seats; the bill also changes when owned seats are moved to a SKU with a different price, and while unneeded seats are still paid until renewal. This table shows the figure an executive needs, and ties it to the License Report and to Estimated Purchase Cost.

Line	Item	Calculation
1	Monthly bill today	Sum of Current D365 Licenses × Price.
2	Until renewal: proposed plan, all moves made now	Owned seats after reclassification plus Qty to Purchase, × Price. Assumes every move can be made during the term.
3	Until renewal: proposed plan, moves made only at renewal	Owned seats kept plus the seats still missing to reach Qty to Own, × Price: the new SKUs are bought now and the old seats stay billed until renewal. Unneeded Premium seats still cover their own standard SKU, because a Premium license includes the standard application. This is the bill of the proposed user assignment without moves, not the cheapest plan without moves (see section “From requirement to purchase: an example”). The Premium SKU's own minimum is not re-applied. For the cheapest plan without moves, see License Assignment Comparison.
4	After renewal	Sum of Qty to Own × Price: unneeded seats are dropped and every move is made.
5–9	Change in the bill	Required minus Current (the License Report Non-compliance total) + seats owned only to meet minimums = change after renewal; + unneeded seats still paid until renewal = change until renewal with all moves made now.
10	Change until renewal, moves made only at renewal	Line 3 − Line 1.
11–13	Check	Estimated Purchase Cost + cost change of moved seats (equal to the total of Monthly Cost Change in the move list) = the change until renewal of line 9. This is an internal consistency check; the query also stops if a SKU is listed twice.

Lines 14 to 16 show the Microsoft default assignment for comparison:

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Line	Item	Calculation
14	Until renewal: Microsoft default assignment, no moves	Each user's highest-priority license as Base (Users_SKU); owned seats kept; the shortfall bought; minimums applied.
15	After renewal: Microsoft default assignment	Microsoft's Required D365 Licenses, at least the minimum, × Price.
16	Change until renewal, Microsoft default assignment, no moves	Line 14 − Line 1; compare with line 10.

Which number to present

To decision makers, present lines 1 to 4: today, until renewal (both timing cases, labeled) and after renewal. For comparison, line 14 shows the Microsoft default assignment, and License Assignment Comparison the best assignment without moves.

Whether a move can be made during the term depends on the customer's agreement: a step-up (for example Activity to Supply Chain Management) may be possible, while moves to a cheaper SKU and swaps between products are often possible only at renewal. Until that is confirmed, show both line 2 and line 3. License Assignment Comparison shows the best assignment without moves (Best Without Moves Bill Until Renewal: $177,465 in the example).

Prices are those in the Subscription table; use the customer's contract prices for a real bill.

How to read it: three bills

The sheet answers one question: what does the company pay per month, before and after the plan? It shows three moments in time:

- Today (line 1): what the company pays now for the licenses it owns.
- Until renewal (lines 2 and 3): the transition. Under most subscription agreements (check the customer's), licenses can be added during the term but not dropped, so licenses nobody needs stay billed until renewal. Line 2 assumes every proposed reclassification can be made now. Line 3 assumes none can: the missing licenses are bought and the old ones stay billed.
- After renewal (line 4): licenses nobody needs are dropped; the company pays only for Qty to Own.

Lines 5 to 13 add no new bill: they explain the difference between today and the other bills in two ways, so the sheet can be reconciled with the other sheets. Lines 14 to 16 show the same bills for the Microsoft default assignment, for comparison.

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Reconciling the sheet with the other sheets, line by line

Example: the company from section “Example: one company's report”. Every line can be rebuilt from columns on the other sheets:

Line	Amount	How to rebuild it
1	$98,400	License Report, Total row, Current Amount (Current D365 Licenses × Price).
2	$162,465	License Report Recommendations: sum of (Current − Qty to Reclass Out + Qty to Reclass In + Qty to Purchase) × Price.
3	$190,065	License Assignment Comparison, Total row, Proposed Bill Until Renewal. Without unneeded Premium seats this equals the sum of (the larger of Current and Qty to Own) × Price in License Report Recommendations.
4	$142,015	License Report Recommendations: sum of Qty to Own × Price.
5	$43,615	License Report, Total row, Non-compliance Amount.
6	$0	License Report Recommendations: sum of (Qty to Own − Recalculated Required) × Price, the seats held only to reach a minimum.
7	$43,615	Line 5 + line 6; equals line 4 − line 1.
8	$20,450	License Report Recommendations: sum of Extra after Reclass × Price (here 409 Activity × $50).
9	$64,065	Line 7 + line 8; equals line 2 − line 1.

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Line	Amount	How to rebuild it
10	$91,665	Line 3 − line 1; equals the Proposed Purchase Cost total in License Assignment Comparison.
11	$21,240	License Report Recommendations, Total row, Estimated Purchase Cost.
12	$42,825	License Reclassification Required: sum of Monthly Cost Change.
13	$64,065	Line 11 + line 12; equals line 9.
14	$196,755	License Assignment Comparison, Total row, Microsoft Default Bill Until Renewal.
15	$144,955	License Assignment Comparison: sum of Microsoft Default Qty to Own × Price.
16	$98,355	Line 14 − line 1; equals the Microsoft Default Purchase Cost total in License Assignment Comparison.

The same bills per SKU

The four bills come from the columns of License Report Recommendations. Seats held until renewal are Current − Out + In + Bought when the moves are made now, and Current + Proposed Qty to Buy (License Assignment Comparison) when they are made only at renewal; without unneeded Premium seats, that is the larger of Current and Qty to Own.

SKU	Price	Owned today	Qty to Own	Moved in	Moved out	Bought	Held until renewal, moves now	Held until renewal, moves at renewal
Supply Chain Management	$210	60	0	0	60	0	0	60
Supply Chain Management Attach	$30	160	340	0	0	180	340	340

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SKU	Price	Owned today	Qty to Own	Moved in	Moved out	Bought	Held until renewal, moves now	Held until renewal, moves at renewal
Finance	$210	100	370	270	0	0	370	370
Finance Attach	$30	0	15	0	0	15	15	15
Project Operations	$135	0	69	69	0	0	69	69
Project Operations Attach	$30	0	307	0	0	307	307	307
Commerce	$210	0	21	21	0	0	21	21
Commerce Attach	$30	0	186	0	0	186	186	186
Human Resources Attach	$30	0	20	0	0	20	20	20
Operations - Activity	$50	1,200	491	0	300	0	900	1,200
Bill (seats × Price)		$98,400 (line 1)	$142,015 (line 4)			$21,240 (line 11)	$162,465 (line 2)	$190,065 (line 3)

What the differences mean

- Line 2 is $20,450 above line 4 because 409 Activity seats nobody needs stay billed until renewal (409 × $50).
- Line 3 is $27,600 above line 2 because, without moves, the seats that would have been reclassified also stay billed: 300 Activity × $50 + 60 SCM × $210 = $15,000 + $12,600. Their replacements (270 Finance, 21 Commerce and 69 Project Operations) are bought instead.
- Real bills can fall between line 2 and line 3 when only some moves can be made during the term. For example, if the step-ups from Activity can be made now but the swap of 60 SCM seats to Finance only at renewal (with the proposed quantities), the bill until renewal is $162,465 + 60 × $210 = $175,065.
- A cheaper plan without any moves exists: the best assignment without moves costs $177,465 until renewal (License Assignment Comparison, Total row, Best Without Moves Bill Until Renewal), $12,600 less than line 3. It is the best the model finds (section “Without reclassification: what the Base license choice alone saves”).
- The change with all moves made now (line 9, $64,065) is more than the purchase estimate (line 11, $21,240) because moved seats are billed at their new price (line 12, $42,825): 210 Activity → Finance and 21 Activity → Commerce at +$160 each, 69 Activity → Project Operations at +$85 each, and 60 SCM → Finance at the same price.
- The License Report's Non-compliance Amount (line 5) is a floor: it leaves out seats held only to reach a minimum (line 6) and licenses nobody needs that are still billed until renewal (line 8).

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- The Microsoft default assignment (lines 14 to 16) costs more: $196,755 until renewal, $6,690 more than line 3 and $34,290 more than line 2. After renewal it costs $144,955: Microsoft's required licenses cost $142,015, the same as line 4, and the extra $2,940 is the 14 Commerce seats (20 − 6) × $210 held only to reach the Commerce minimum.

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License Assignment Comparison

Sheet: **License Assignment Comparison**

Three ways of assigning the licenses users need, all without reclassifying any owned license: the company keeps everything it owns and buys only what is missing. It shows how much the Base license choice alone saves (section “Without reclassification: what the Base license choice alone saves”). For each plan (Microsoft Default, Proposed, Best Without Moves) it has five columns.

Column	Meaning
SKU, Current D365 Licenses, Min, Price	As in the Subscription table.
Current Amount	Current D365 Licenses × Price: today's bill for the SKU.
… Required	Licenses users need under the plan. Microsoft Default: Microsoft's out-of-the-box count (Users_SKU). Proposed: Recalculated Required (Final_With_Anchor). Best Without Moves: the allocation the model finds when moves are not allowed.
… Qty to Own	Required, at least the minimum (0 if nothing is required).
… Qty to Buy	Licenses to buy while keeping every owned license. Unneeded Premium seats cover their own standard SKU first. Unlike Qty to Purchase in License Report Recommendations, which assumes the moves are made.
… Purchase Cost	Qty to Buy × Price.
… Bill Until Renewal	(Current + Qty to Buy) × Price.
Total row	Sums of Current Amount, Purchase Cost and Bill Until Renewal.

The sheet runs the optimization a second time with moves switched off (query Anchor_Model_No_Moves); its refresh takes about as long as the other reports.

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User Assigned Licenses

Sheet: **User Assigned Licenses**

The optimized view: one row per user and license to assign, after the Base license choice (see section “Base license choice”). Use it to assign licenses in the Microsoft 365 admin center.

Column	Meaning and calculation
User	Dynamics 365 user ID.
Original or Added License	The license group of this row: a license the user needs (from User_SKU), or the Base license the optimization added for this user (see section “Microsoft out-of-the-box versus the optimized bill: an example”).
Assigned Base License	The user's Base license after optimization (same value on all rows of the user).
Assigned License Type	Base or Attach for this row.
Assigned Product	The product of this row (the SKU without " Attach").
Assigned SKU	The exact SKU to assign: the standard SKU for the Base row, "<product> Attach" for Attach rows.

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User Assigned Licenses No Moves

Sheet: **User Assigned Licenses No Move**

The same columns as User Assigned Licenses, for the best assignment without moves: which license to assign to each user if owned licenses can only be reclassified at renewal. Load the query User_Assigned_Licenses_No_Moves to a sheet when needed; it runs the allocation once more.

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Queries without a sheet

Sheet: **User Assigned Licenses No Move**

Query	Purpose
License_SKU	SKU-to-license-group list from the Subscription table.
User_License	Converts User_SKU to license groups, counts each user and SKU once, removes covered requirements and stops if a SkuName is unknown.
Constant_SKU	Fixed SKU display order for the reports.
Anchor_Model	The calculation engine: base license choice and reclassification
Anchor_Model_Fn	The calculation engine as a function: Anchor_Model and Anchor_Model_No_Moves call it with reclassification switched on or off. Load as connection only.
Anchor_Model_No_Moves	The same calculation engine with reclassification switched off; used by License Assignment Comparison and User Assigned Licenses No Moves.
Final_With_Anchor	Per-SKU detail of the optimization. Load it to a sheet to see extra columns such as Need Before Reclassification and Current After Reclassification.

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READING THE RESULTS

1. License Report: where is the company short (positive Delta) and where does it pay for licenses it does not need (negative Delta)?
2. License Report Recommendations: what has to be bought (Qty to Purchase, Estimated Purchase Cost) and what stays unused (Extra after Reclass, candidates to drop at renewal).
3. License Reclassification Required: which SKU changes to request from the partner.
4. User Assigned Licenses: which license to assign to which user in the Microsoft 365 admin center. Compare it with Users_SKU to see where the optimized assignment differs from Microsoft's default.
5. License Bill Summary: what the company pays per month today, until renewal and after renewal. A low purchase cost can hide price increases of moved seats and idle seats that fill a minimum (sections “From requirement to purchase: an example” and “License Bill Summary”).
6. License Assignment Comparison: what the Microsoft default assignment, the proposed plan and the best assignment without moves cost when no owned license is reclassified.
7. Validate prices, minimums and reclassification rights against the customer's agreement before deciding.

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HOW TO REFRESH THE WORKBOOK

1. Subscription: enter Current D365 Licenses for every SKU (empty = 0); check Min and Price. Do not rename SKUs or the table.
2. User_SKU: replace all rows with the prepared UserId and SkuName data (section “User_SKU table”). Paste below the header so the table grows, and delete leftover old rows if the new list is shorter.
3. Privacy setting (once per workbook): Data > Get Data > Query Options > Current Workbook > Privacy > "Ignore the Privacy Levels and potentially improve performance". The queries read only tables inside the workbook; with privacy checks on, a refresh takes minutes instead of seconds.
4. Data > Refresh All. Wait until the status bar shows no running queries.
5. Check the results: in Data > Queries & Connections, no query shows an error; the Total row of License Report Recommendations has a value; User Assigned Licenses has at least as many rows as Users_SKU; License Bill Summary shows 16 lines; License Assignment Comparison has a Total row.
6. Save the workbook.

Possible errors and what to do:

Message	Cause and fix
Unknown SkuName: SkuName in the User_SKU table with no matching SKU row in the Subscription table: …	A SkuName from Dynamics 365 has no row in Subscription (for example a legacy SKU such as Operations, or a different spelling). Correct or replace the SkuName in User_SKU with the current SKU name. Add a Subscription row only for a genuinely new Microsoft SKU: set its License to one of SCM, Finance, Commerce, Project, HR, Activity or Team Members, and place it below the standard row of that product.
Unknown SkuName: SKU row in the Subscription table with a blank License: …	Fill in the License column of that Subscription row.
Missing Base/Attach SKU in the Final table for License: …	A license group in Subscription has no standard SKU row, or a full application has no Attach row. Add the missing row.
Duplicate SKU: SKU listed more than once in the Final table	A SKU appears twice in Subscription. Remove the duplicate row.
More than one Premium SKU in the Final table for: …	Two Premium rows map to the same standard SKU. Keep one.
Moves do not match Final_With_Anchor In/Out	Internal consistency check of the move list. Refresh again; if it repeats, report it with the workbook.
Bill summary check: The bill lines do not add up	Internal consistency check of License Bill Summary. Refresh again; if it repeats, report it with the workbook.

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Message	Cause and fix
A table keeps old values	When a query fails during Refresh All, Excel keeps the previous results. Check the refresh status before using the numbers.

Refresh time grows roughly in line with the number of users: seconds for about 1,000 users, a few minutes for about 10,000 users. Use 64-bit Excel for large user counts.

Some error messages still call the Subscription table "the Final table" (its earlier name).

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GLOSSARY

Term	Meaning
SKU	A specific licensing product, such as Dynamics 365 Finance or Finance Attach.
Base license	The user's primary (highest-priced) license; required for every full user.
Attach license	Discounted license for a further full application of a user who has a qualifying Base license.
Added Base	A Base license the optimization gives a user who does not need that application, because it lowers the company's bill (for example SCM Base plus Commerce Attach instead of a Commerce Base).
Minimum purchase requirement	Minimum number of seats of a product the company must hold if it uses the product.
Reclassification	Changing the SKU of seats already on the subscription, where the agreement allows it.
Required (out of the box)	Licenses required per Microsoft's default Base/Attach rule.
Recalculated Required	Licenses required after the base license choice.
Qty to Own	Seats the company must hold per SKU after minimums.
Qty to Purchase	New seats to buy after owned seats and reclassification.
PPAC	Power Platform admin center, where Microsoft reports license requirement and assignment.
Best assignment without moves	The cheapest assignment the model finds when every owned license stays on its SKU (no reclassification) and only missing licenses are bought.

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SOURCES

- Microsoft Learn: View license consumption for finance and operations apps – https://learn.microsoft.com/en-us/power-platform/admin/view-license-consumption-finops-apps
- Microsoft Product Terms, Dynamics 365 (Purchasing Minimums; Prerequisites for Base and Attach user subscription licenses) – https://www.microsoft.com/licensing/terms/en-US/productoffering/MicrosoftDynamics365Services/ovses
- Dynamics 365 Licensing Guide – https://go.microsoft.com/fwlink/?LinkId=866544

Prices, minimums and reclassification rights are subject to Microsoft's current terms and the customer's agreement. Validate them before making purchasing decisions.

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WHAT'S NEXT

Microsoft validates Dynamics 365 Finance and Supply Chain licenses user by user, and most companies are either paying for seats nobody needs or are one security role away from blocked users.

We fix both.

Our Evidence-First license optimization starts from your environment exactly as it is: no changes to roles or users. It calculates the cheapest compliant subscription right away, using the licenses you already own and Microsoft's minimum rules. We then go further, redesigning security from real usage so every user has exactly the access, and the license, their work requires.

Across our published case studies, license spend fell by 25 to 44%.

The analysis costs about as much as two full Dynamics 365 licenses for one year, and is free for qualifying clients. In just a few days we go from your data to a proposed optimal configuration, ready to import into your test environment within an hour.

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