Review of the performance-based allocation model for government funding for research and postgraduate education

Faculty Board

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Karolinska Institutet

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Background

The University Board (Konsistoriet) tasked the President with conducting a review of KI's internal resource allocation (ref. no. 1-890/2023). In 2024, the President decided on a new model for the allocation of government grants for research, with a focus on simplicity, transparency and predictability (ref. no. 1-578/2024). The reformed allocation model comprises three parts:

1) Basic funding for the three department groups (introduced)
2) Review of the performance-based allocation model for research funding, and
3) Review of rent costs and subsidies.

Assignment

On 11 November 2024, the President tasked the Faculty Board with reviewing the current performance-based model for allocating parts of the government grant for research and doctoral education and, if necessary, proposing a new model (ref. no. 1–940/2024). The Faculty Board was instructed to appoint a working group for the task, with support from colleagues from Professional Services and KI's University Library (KIB). The results were to be presented in June 2025, but to enable broader support and incorporation of relevant views, the investigation period has been extended to September 2025.

Delegation, preparation and support

At its meeting on 18 December 2024, the Faculty Board appointed a working group led by Vice President Martin Bergö (ref. no. 1–1134/2024). The working group consists of teacher representative Mikael Karlsson, Academic Vice President for Research Marie Arsenian-Henriksson, Academic Vice President for Research Education Robert Harris, Dean of the South Department Group Matti Sällberg, and Dean of the Solna Department Group Sten Linnarsson. To ensure the clinical perspective, Professor Kristina Broliden was added to the working group. Outi Sjölund, Bengt Karlsson, Catharina Rehn, Peter Sjögårde, Karin Schmekel, and Magnus Ericson participated from Professional Services.

The working group held six meetings and reported regularly to the Faculty Board. Professional Services provided expertise, regulatory competence, statistics, bibliometric data, and simulations.

The working group's proposals have been anchored through information provided at departmental group and head of department meetings, where the President, Vice President, deans and Academic Vice Presidents, with the support of Professional Services, presented the direction and preliminary outcomes in relation to base funding and the proposed premises cost model. Questions and comments were collected and answered at the meetings. In addition, written input has been received from a group of heads of department, a departmental group, individual departments and employees (Appendix 3). These comments have been considered in the working group's final considerations. Remaining comments, together with the results from KIRA, can be addressed in the upcoming annual review of the model.

KI's current resource allocation model

The most recent review of the previous model, known as the activity model, was carried out in 2020 (ref. no. 1–945/2019). The model was based on 50% bibliometrics, 40% external grants and 10% degrees (doctorate, licentiate and docentship) with the aim of promoting scientific quality through competition.

The activity-based model has now been divided into two parts: base funding, which should be stable and predictable (already introduced), and a performance-based part, which should drive quality (see the section *Discussion of the relationship to other parts of resource allocation*). Since base funding constitutes a significant part of the total allocation, there is reason to develop the performance-based part so that it becomes more accurate and avoids double counting.

The working group believes that the ability to differentiate in the activity-based model used to date is limited.

Bibliometrics: placing great emphasis on journal impact factors risks rewarding publication strategy over actual scientific significance and disadvantaging fields with different publication traditions.

External grants: outcomes based on amounts paid in by many funders, without sufficient weighting for competitiveness and peer-review quality, tend to reward volume over excellence.

Degrees: produced continuously throughout the organisation and therefore provide limited guidance on quality.

Several of the above indicators are already considered in the base funding that has been introduced. If they are also used in the performance-based model, there is a risk that the overall allocation of resources will be characterised by double control, lower transparency and poorer accuracy, with incentives that do not fully support KI's quality ambitions.

A new performance-based allocation model

Target

The working group has agreed on and based its work on the following principles in developing the model:

- The model should reward high research quality, particularly documented scientific impact and success in internationally competitive applications.
- Excellence, breadth and sustainable quality in the activities shall be rewarded.
- Parameters and weighting shall be simple, understandable and possible to follow up.
- The model shall be able to handle the publication and merit traditions of different research areas.
- The indicators are based on researchers' achievements, but the model is intended for use at departmental level and cannot be used in the same way for groups or individuals.
- The model shall be reviewed annually and, if necessary, adjusted in terms of components and weighting. Fundamental changes to the entire model shall be decided by the President on the recommendation of the Research Council.

Purpose and focus

The purpose of the performance-based allocation model is to drive KI's research towards higher quality and greater impact. A base funding has been added to

each department group to provide stable base funding and enable strategic priorities. Given that base funding has now been introduced, the working group believes that the performance-based component should be more clearly focused on excellence and international competitiveness.

Principles for incentives and choice of indicators
The model should encourage publication in recognised high-quality journals and reward external funding from the most competitive, merit-based and peer-reviewed funding bodies.

The working group agrees that publications and external funding remain the most relevant indicators for measuring research quality, but that both need to be modernised and refined. However, the number of degrees should not be included in the performance-based model. The reasons, as described above, are that degrees primarily reflect the educational mission rather than the quality of research; have low discriminatory power as performance is continuous across the entire organisation; and are already taken into account in the base funding.

Renewed use of indicators
The working group proposes that the measures for publications and external grants be modified.

For publications, Journal Impact Factor (JIF) will be replaced by a peer-reviewed journal list (see below) that considers different publishing traditions within subject areas relevant to KI. This is in line with international developments for responsible research evaluation and KI's commitments within the Coalition for Advancing Research Assessment (CoARA).[1]

For external grants, peer-reviewed competitive national and international grants from a limited number of research councils and foundations are recommended. Selection and weighting should take into account the degree of competition (e.g. approval rate), scientific quality in the assessment and the relevance of the grants to excellent and groundbreaking research.

Proposal for the distribution of decision-making and responsibility
The Faculty Board should establish the performance-based model (principles, indicators, weighting); decide on the composition of the journal list based on

[1] https://coara.eu/

proposals from the Research Committee and approve the results of the annual review and any adjustments.

The Faculty Board shall decide annually on the application and fine-tuning of indicators and weightings based on proposals from the Research Committee.

The Research Committee should be tasked with developing, managing and annually updating the peer-reviewed journal list (with the support of a peer panel and KIB), as well as following up on outcomes, performing calibration analyses and submitting proposals for any adjustments to the Faculty Board/the President.

Annual review and decision-making process
The Research Committee prepares the basis – the Faculty Board decides on the list and recommends adjustments – the President makes annual application decisions. Fundamental changes to the model are decided by the President on the recommendation of the Faculty Board. Operational adjustments are handled in the annual cycle.

External grants (50% of performance-based funding)

It is proposed that 50 per cent of the funds in the performance-based allocation model be distributed based on the institutions' ability to create an environment in which researchers receive certain external grants; the remaining 50 per cent will be based on bibliometrics (see below).

External competitive funds are a strong indicator of scientific quality and of the institution offering support structures that enable success in tough national and international competition. Selection for the model is therefore limited to funders with a strong position in the scientific community, high competition, merit-driven, very good scientific quality and robust peer review. The working group believes that this promotes quality, transparency and comparability.

The funds are divided into two categories with different calculation methods:

Category 1: number of grants (4/5 of the funds)
This includes funders with the highest level of competition and scientific standing. The activity is registered when the grant application is approved by the funder, accrues to the institution where the decision was made and remains for five years (i.e. does not follow the researcher if they move). The aim is to reward

genuinely competitive and merit-driven excellence regardless of the project amount.

- European Research Council (ERC), (Starting, Consolidator, Advanced, ERC+ Synergy) – weight 1.0
- Coordinator role in EU projects – weight 0.5
- Knut and Alice Wallenberg Foundation (KAW), (project, Scholar, Clinical scholar, Academy fellow) – weight 0.5

Category 2: amounts paid in (1/5 of the funds)
This includes funds paid in from selected national funding bodies with large annual distributions, established peer review and national reach in areas where KI has extensive activities. The activity is registered when funds are made available and follows the researcher when moving between institutions, reflecting where the project is actually conducted. The selection reduces fragmentation and provides a stable quality signal. Smaller diagnosis-specific funds are captured through core funding and bibliometrics and can be reviewed during the annual review.

- The Swedish Research Council (VR), Forte, Formas and Vinnova
- The Cancer Foundation, the Heart-Lung Foundation and the Brain Foundation

Bibliometrics (50% of performance-based funding)

The bibliometric component shall reward high scientific quality and impact. The model measures both journal quality and article impact, considers field-normalised and cross-disciplinary impact, and provides a stronger return for high production in qualitative channels than for low production with corresponding impact. KI-led studies are rewarded ahead of studies in which KI has only participated. Important starting points are simplicity, transparency, incentives to verify publications, and balance between the indicators.

Indicators and weighting (four components, each accounting for 25%)
The model includes four bibliometric indicators: two based on a list of selected and trusted journals, and two based on citations. Funds are distributed equally among the four components.

Journal quality 50%

- Total journal levels (25%)

- Average journal levels (25%)

Article impact 50%

- Total citations (C)-level weights (25%)
- Average Cf level weights (25%)

Category 1: Journal list

In the proposed model, the JIF indicator is removed. Instead, two indicators based on an upcoming KI list of approximately 5,300 journals with manually assessed levels are used.

The list is developed and managed by the Research Committee with support from international examples (ref. no. 2-1422/2025). The distribution is initially based on the prototype of the list that is produced as a basis for a panel appointed by the Research Committee.

The principles, inclusion criteria and division of journals into two levels in the prototype are based on corresponding national lists in Norway and Finland. Level 3 (highest quality) is included from the start, and until the final KI list is established, Nature Index[2] is used as a temporary basis for which journals are placed in level 3 (currently 145 journals). The final KI list will continue to consist of three levels. In the proposed distribution model, the journals are then assigned weights at each level as follows:

- Level 3 (highest quality, top 5%) – weight 20
- Level 2 (high standard, 5-20%) – weight 5
- Level 1 (other peer-reviewed journals) – weight 1

Both the sum and the average of the weights across all of the institution's publications are used in the model to balance volume and quality.

Category 2: Citations

The two bibliometric indicators for citation impact, total citations (total C) and field-normalised citation rate (Cf), are retained from the previous model (ref. no. 1-945/2019). To reduce sensitivity to extreme values and create consistency with the journal component, publications are divided into levels:

- Level 3 (top 5% globally, C and Cf) – weight 20
- Level 2 (5–20% globally) – weight 5
- Level 1 (others) – weight 1

[2] https://www.nature.com/nature-index/faq#journals

The classification of citation indicators into levels is thus done in the same way as the journal list, in three levels. The weights for the levels correspond to those in the journal component, i.e. 20, 5 and 1.

KI leadership, author position and affiliated
Additional weighting based on authorship order/affiliation is retained. However, the weighting for the lowest KI affiliation is reduced from 0.2 to 0.05 in order to more clearly reward KI-led studies.

Assessing the level of activity of individual researchers at KI, with the support of existing systems, was not considered possible. The activity of affiliated or part-time researchers is therefore counted in the same way as in the previous model. The proposal to reduce the weighting for publications with few KI authors who do not appear prominently in the author list is considered to address the issue to some extent.

Model balance and effect
The simulations indicate minor differences compared with previous indicator shares but maintain the balance between total/average (50/50) and journal/article indicators (50/50). Overall, clear incentives are created for good publication practices, sustainable quality and impact across and within disciplines.

The working group's reasoning regarding the design of the model

The starting point is to reward high-quality research with impact across all of KI's activities. This is done using simple and transparent indicators that are field-normalised, stable over time (a five-year window for calculation is applied) and difficult to "optimise" without real quality. The bibliometrics are therefore based on a peer-reviewed journal list and level-based citation metrics. External funding is weighted toward the most competitive and meritorious funders, with an emphasis on those who allocate funds to groundbreaking research. The model is controlled at the university and department level, calibrated annually, and is in line with the government's distribution principles.

Bibliometrics
Both the journal list and the citation rate are proposed to be divided into three ranked levels corresponding to the top 5%, 5–20% and 20–100% of

publications/citations. By giving these three levels weights of 20, 5 and 1, the result is that approximately one third of the funds are allocated to each level. If, for example, the weighting for the highest level were to be reduced to 10, the result would be that twice as much funding would be allocated to publications at the lowest level compared with the highest.

The working group proposes that JIF be replaced by a list of journals compiled by KI researchers through a panel under the Research Committee. The reason for this is partly that JIF is a commercial product that requires a license and whose design is not entirely transparent, and partly that it is difficult to capture the breadth and variety of KI's research using simple quantitative measures. By instead actively selecting journals with a good reputation and high editorial quality, top journals in all fields can be ranked highly regardless of JIF. The journal list thus also serves as a field standard.

Selection of external financiers in the model
The government allocates research funding based on, among other things, the ability of higher education institutions to secure EU funding. The government specifically points out that ERC grants should be given greater weight when calculating state funding for higher education institutions. By adapting KI's resource allocation model to this approach, KI's ability to compete for state funding nationally is increased. This means that the more KI researchers receive EU funding — especially ERC grants — the more funding KI receives in total, which benefits the entire organisation.

The ERC can be considered the most robust internationally comparable indicator of excellence at the institutional level for several reasons:

- The assessment of applications focuses on originality and breakthrough potential, not volume.
- High competition in a multi-stage process with international peer review ensures rigorous selection and legitimacy.
- The ERC's panels cover the entire spectrum of life sciences, enabling fair comparability between clinical and preclinical research fields.
- Obtaining an ERC grant requires both an exceptional applicant and a research environment that enables excellence, and the outcome therefore also reflects the institution's capacity.
- ERC accreditation strengthens KI's attractiveness for top recruits, doctoral students, postdocs and strategic collaborations.

- By giving the ERC clear weight in the performance section, the model sends a mobilising signal that even environments that have not applied so far, despite world-leading research, are encouraged to raise their application ambitions.

The working group considers that several of these justifications also apply to EU projects with a coordinating role and KAW.

In addition to the ERC/EU/KAW, the model includes a selection of national funding bodies: VR, Forte, Formas, Vinnova and three broad diagnostic funding bodies, the Cancer Foundation, the Heart-Lung Foundation and the Brain Foundation. These have national reach, significant and stable annual distributions (100 MSEK/year), established peer review, and fund research into major public health diseases in which KI has extensive activities. To avoid fragmentation, smaller diagnosis-specific funds are not included in the indicator. Their contributions are instead captured via base funding and bibliometrics. The selection is reviewed in the annual review.

In summary: The selection of funders (ERC, EU coordination, KAW, as well as government funders and large funds) and the proposed weighting reflect internationally verified quality and breadth. By counting the most selective contributions as *numbers* over five years and the rest as *amounts paid,* we reduce volume premiums and increase predictability. The model is in line with government funding and benefits our entire organisation. The incentives are open to both clinical and preclinical research, with annual calibration and distribution at the institutional level rather than to individuals.

Implementation and delimitation

The new performance-based distribution model will be implemented from 2026 onwards and will form the basis for budget decisions in October 2025 (President, the Faculty Board, the Research Committee).

The calculation inputs for the model are based on the outcomes of the last five years. The bibliometric part uses two time-windows:

- The journal list indicators are calculated over 5 years.
- The citation indicators Total C (raw citations without standardisation) and Cf (field-standardised citations) are calculated over 4 years, excluding the

most recent year. For Total C, the division is made into three levels over the entire period and for Cf within each year.

Components and weights are reviewed annually, and, after assessment, the Faculty Board decides on any adjustments.

The bibliometric part based on a journal list will, in 2026, be based on a prototype based on external journal lists (Appendix 2). Once KI's own peer-reviewed list has been decided, it will be used. The Research Committee shall manage and develop the list on an ongoing basis and ensure that it meets the requirements set by the Faculty Board.

The performance-based allocation model is central and specifies the allocation to the campus groups' departments. It is not designed for internal allocation from the head of department to individual researchers. Such decisions are made locally based on the priorities of the activity.

The new resource allocation model is not intended for ALF allocation (agreement on medical education and research). ALF funds are earmarked for clinical research and are handled in a separate process with the region. If the model is used for ALF in the future, an adapted ALF version will probably be required, with adjusted indicators and weighting (e.g. greater weighting for clinical trials, patient-centered research and collaboration) as well as separate threshold values and decisions in joint KI-region bodies.

Impact analysis

If we do not introduce a new model, KI's administrative capital (myndighetskapital) will continue to grow, which increases the risk that the government will reduce its state grant to KI. We therefore need to use our funds more efficiently and predictably, close to the core operations.

Bibliometrics and behavioural risks: Balancing multiple indicators (journal levels and citations, sum and average) reduces the risk of short-term optimisation of the measures and strengthens the focus on true scientific quality.

Stability and predictability: Five-year windows even out variations. Open and transparent methodology makes the outcome easier to predict and influence over time.

KAW/nomination process: The model does not influence KI's ability to conduct a transparent internal nomination process. Regarding KI researchers sitting on KAW review panels, KAW applies formal rules on conflicts of interest, and KI works with clear internal guidelines for nominations, with transparency, conflict of interest management and broad invitations ensured in specific guidelines.

Relationship to ALF: The model is central to KI and separate from ALF. Whether the model can be used directly or modified, or alternatively rejected for ALF allocation, will be evaluated with simulations in a separate dialogue with the region.

Recruitment and mobility: Bibliometrics and external funding in *category* 2 (funds received) follow the researcher in the event of internal relocation. For external funding, *category 1* (number of grants awarded), the activity remains at the original institution for five years (even when the ERC project and funding move with the researcher). This rewards both the environment that made the grant possible and facilitates the rapid impact of new recruitments.

Reasoning regarding the relationship to other parts of resource allocation

KI has a central model for the allocation of grants for research and researcher education. This consists of the base grant and the performance-based allocation, which together replace the previous activity-based model. These parts should not be considered separately, but as two parts of a coherent whole.

The purpose of the base funding is to provide the institutions with stable and predictable basic funding. The base funding is based on the institution's entire activities, both research and education, and is based on total turnover. The performance-based allocation aims to promote scientific quality.

If it turns out that the performance-based resource allocation together with the basic funding have inappropriate consequences for individual institutions, the University Board (Konsistoriet) has the option of regulating this within the framework of its allocated funds. Deans can also buffer and phase in effects within their respective institutional groups. If necessary, the proportion between the base and performance components can also be adjusted within the regular budget process, after preparation in the Research Committee/the Faculty Board and a decision in accordance with the applicable decision-making procedure.

Appendices

Appendix 1 – External grants (data sources and calculation)

The purpose of this component is to measure the ability to obtain peer-reviewed, competitive and merit-based external funding. All calculations are based on the five most recently completed years (for 2026: 2020–2024).

Category 1: number of grants awarded (4/5 of the funds)
The Grants Office (GO) at Professional Services compiles a list of approved applications and the associated decision year and institution. ERC is weighted by a factor of 1; EU projects with coordination and KAW (projects, scholars, clinical scholars, academy fellows) are weighted by 0.5.

Activity is registered when the grant decision is made, accrues to the department that received the funding decision, and remains there for 5 years (it does not follow the researcher if they move). Each grant is counted once per decision year.

Category 2: amounts paid (1/5 of the funds)
The Planning and Follow-up Unit (PU) at Professional Services retrieves data via a standardised report (browser query) in the financial system used for calculation. The browser query summarises all relevant transactions in payment accounts during the period 2020–2024.

Grants included are from government funding bodies (VR, Forte, Formas, Vinnova) and large foundations, with a focus on widespread diseases in which KI has extensive activities (Cancer Foundation, Heart-Lung Foundation, Brain Foundation).

Activity occurs when funds are made available. In the event of an internal researcher transfer, the activity follows the researcher to the new institution. This occurs automatically via the financial system. The institutions are responsible for ensuring that the reporting of researcher transfers is correct.

Appendix 2 – Bibliometrics

As in the previous model, the bibliometric calculation is based on researchers' verified publications in KI's bibliometric database (currently Web of Science and Medline). Visiting professors, foreign adjunct professors and honorary doctors are not included.

Time window

- Journal indicators: 5 years
- Citation indicators: 4 years (the most recent year is excluded as only small amounts of citation data are available).

Author weighting (best placement counts per publication)

- 1.0 = if the institution's author is first, last or corresponding (entire publication)
- 0.6 = if the institution's author is second first or second last
- 0.4 = if at least 10% of the authors belong to the institution
- 0.05 = if the institution has fewer than 10% of the authors, or only has group authors

The working group has examined the possibility of weighing in the actual level of activity at KI for the researcher (full-time/part-time/affiliation). However, in practice, it is impossible to know for certain based on the available information. Some of those employed part-time have all their research and research funding, and thus all their publications, funded through KI. It is also possible to be a full-time employee but on part-time leave. Finally, many of KI's research clinics are affiliated, and the affiliation system does not distinguish between full-time and part-time, while many clinics conduct most of their research at KI. The reduced weighting of 0.05 for weak KI affiliation in the publication is considered to address a large part of the problem.

Category 1: Journal list

The Research Committee has decided to establish a tiered journal list at KI (ref. no. 2-1422/2025). Work will begin in autumn 2025 and a list is not yet available. As part of the development of a list, KIB has begun work on producing documentation for the establishment of the journal list. In Norway and Finland, there are journal lists with levels assessed by panels in different subject categories. These levels have been used to develop documentation at KI and are proposed to be used in resource allocation before KI has established its own list.

The list is limited to journals in which KI has published in the last five years, and which are indexed in Web of Science and/or PubMed. Medical journals that have level 2 or 3 in the Finnish list or level 2 in the Norwegian list (the Norwegian list has only 2 levels) have then been added. The documentation contains a total of approximately 5,300 journals.

Levels in the Norwegian and Finnish lists have been used to assign levels in the preliminary list. Journals that have at least level 2 in both lists have been assigned level 2. Journals that have level 1 in at least one of the lists have been assigned level 1. Journals that do not appear in either list have been assigned level 1. This concerns a small number of journals in which KI has published and which are indexed in PubMed or Web of Science. It is proposed that these be assessed manually in the future. For level 3, the Nature index has been used, following a proposal from the Faculty Board working group for review of the resource allocation model. The Nature index currently contains 145 journals in medicine and natural sciences.

Category 2: Citations

- Field-normalised citation rate (Cf) is calculated by dividing the number of citations to each publication by the average number of citations for all publications published in the same year, in the same subject category (based on journal) and of the same publication type (articles or reviews). The standardisation handles differences in publication patterns between different subject areas. As standardisation is done per year, differences in how quickly publications are cited are handled, and publications that continue to be cited up to five years after publication have a positive effect on the indicator.
- The level classification is based on the same publication volume, so that the 5% most cited within the volume are assigned level 3, the 5–20% most cited are assigned level 2, and the rest are assigned level 1.
- For the number of citations (total C), the classification into levels is based on all publications within a four-year period (the most recent year is not included), i.e. no standardisation is applied. Here too, level 3 consists of the 5% most cited publications, level 2 of the 5–20% most cited, and the rest are assigned level 1.

Proposed balance between the four bibliometric components

	Total/Aggregate 50	Proportion/Average 50
Journal quality 50	Total journal level weights (25%)	Average journal level weights (25%)
Article impact 50	Total C-level weights (25%)	Average Cf level weights (25%)

Proposed level classification and weights in the calculation

Journal level	Cf[3] -level (topX %)	C level	Weight
3	1	1-5	2
2	5	5	5
1	20-100	20	1

Technical adjustment (Cf - mean value)

- **Why adjust?** The mean value of Cf weights has relatively low dispersion between institutions, which makes the indicator blunt.
- **How is the adjustment made?** The institutions' average Cf weight is centered on the world average of 2.55 (given the level weights 20/5/1). The outcome is thus reduced by 2.55 (but can never be negative). The method follows the current model and increases the ability to distinguish without driving extreme outcomes.

Simulations of the bibliometric component (overview)

For the bibliometric parameter, simulations were carried out to analyse the effects of different choices in terms of level structure, level weights, distribution between indicators (journal quality/article impact; sum/average), and author weighting. The six simulations are summarised below:

[3] Cf standardises across subject area (Web of Science journal categories), publication year and publication type (articles and reviews)

1. Journal list with 3 levels with weights 1, 3, 10 as an alternative to JIF, sums and averages of journal weights, 50%. Sum C, Cf and author weighting unchanged from the current model.
2. Journal list, 4 levels, equal activity share per level, with a special category for publications where KI is first, last or corresponding. Total C 10%, Cf 15%; unchanged author weighting.
3. Journal list, 3 levels (weight 1, 3, 10); 75% journals (sum+average); C 10%, Cf 15%; unchanged author weighting.
4. Journal list, 3 levels (weight 1, 3, 10); level classification also for C and Cf, equivalent shares as in the current model; author weighting as today, but minimum weight reduced from 0.2 to 0.05.
5. Journal list, 3 levels (weight 1, 3, 10); 100% average of journal weights (no sum); lowest author weight 0.05.
6. Journal list, 3 levels (weight 1, 5, 10); level classification also for C and Cf, equal shares between the four bibliometric parts (25% each: total journals, average journals, total C, average Cf); lowest author weight 0.05.

Selected option. Simulation 6 was selected for the following reasons:

- Balance: 50/50 between journal quality and article impact and between total and average provides balance and simplicity.
- Clear level signal: weights 1, 5, 20 give roughly comparable average shares per level (top 5%, 5–20%, others) and avoid over-rewarding the lowest level.
- Field standardisation and robustness: level classification of C and Cf reduces the impact of extreme values and favours real impact
- Leadership: a lower minimum author weight (0.05) rewards KI-led publications without excluding collaborations.

Principle for level weights. The weights 1, 5, and 20 were chosen so that a comparable share of the funds would go to each level when the level's share of world literature is multiplied by the level number. This provides an incentive to invest in the highest quality without penalising a reasonable volume.

Appendix 3 – Input from the organisation and the working group's positions

Summary of comments received

- **Indicators/weighting**: ERC's relative weight; inclusion of more high-profile funders; balance between "number granted" and "amounts paid"; 4/5-1/5 distribution; relevance/benefit; risk of smaller funders being disadvantaged.
- **Bibliometrics**: tiered journal list vs JIF; use of Nature Index; citation lag/half-life.
- **Disciplinary balance/signal**: impact on clinical, health science, patient-centred and epidemiological fields; relationship to education-heavy environments and to ALF.
- **Implementation/risk**: too short a time frame, need for risk analysis and link to KIRA.

Handling of comments in the model

External funding: ERC is retained as a strong indicator of excellence; KAW and EU coordination included. Note that ERC grants are distributed equally between clinical and basic science institutions, while KAW and EU coordination are slightly more common in basic science. *Category 1* is counted as the number of grants awarded (with a 5-year period), while *Category 2* is counted as the amount paid. The 4/5-1/5 distribution is based on simulations and is reviewed annually.

Bibliometrics: a panel-approved KI journal list in 3 levels replaces JIF; Nature Index (with 145 top journals, including a large proportion of clinical journals) is used temporarily to identify level 3. Citations (C and Cf) are classified by level and Cf is calculated in a 4-year window. 50/50 between journal and citation measures and between total/average.

Discipline balance/ALF: A preliminary analysis shows that the new model provides better conditions for clinical research than the previous one. The prototype journal list includes a high proportion of clinical journals at levels 2–3, and KI can calibrate the selection as needed. The field-normalised citation rate for KI's and Region Stockholm's clinical research has for several years been at least as high as KI's other research. The model is central and separate from ALF; a

specially adapted version is required for ALF application. Basic funding covers breadth and education grants, and transitional support can be used locally within campus groups or institutions if necessary.

Implementation/risk: five-year data, annual review and risk monitoring; KIRA results can be incorporated into future reviews.

Appendix 4 – Abbreviations

ALF	Agreement on medical education and research
C	Refers to citations
Cf	Refers to field-normalised citation rate
ERC	European Research Council
EU	European Union
GO	The Grants Office unit within the Office of Research Support and External Relations (FER) at Professional Services
JIF	Journal Impact Factor
KAW	Knut and Alice Wallenberg Foundation
KI	Karolinska Institute
KIB	Karolinska Institute University Library
KIRA	Karolinska Institute Research Assessment
PU	The Planning and Follow-up Unit within the Office of Legal, Planning and Finance (JPE) at Professional Services
VR	Swedish Research Council