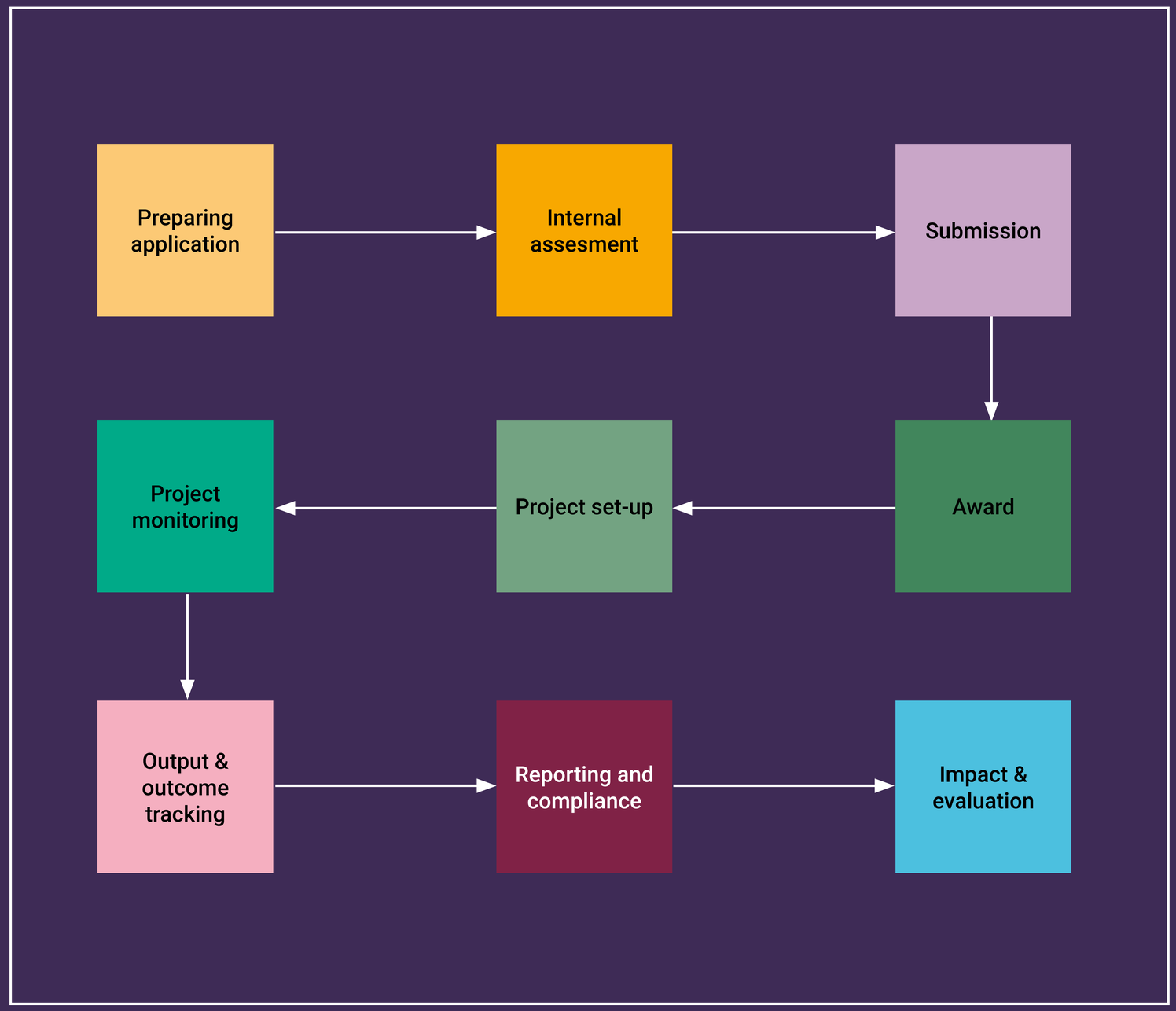
Institutional research management workflow



Start →

Process	Activity	Relevant persistent identifier(s)	PID interaction
Preparing application	Idea gathering and planning	DOI, ORCID, ROR, RAiD	Researchers explore content, previous grants, projects etc. as part of their landscape exploration, with PIDs supporting both discovery and citation.
	Identify funding opportunities	DOI, ROR	RORs for funders and DOIs for grants help in identifying both funders and funding calls
	Developing value propositions or business cases for work		
	Costing and pricing of activities	RAiD, ROR	Instruments, facilities etc. uniquely identified using RAiD and ROR **AND** RAiD used to pull up previous project data to support costings re-use.
	Developing Data Management Plans etc	DOI, ORCID, ROR, RAiD	Institutions register DOIs for data management plans **AND** include (or register) PIDs for repositories, facilities, equipment, etc. as needed.

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Internal assesment	Identify collaborators within and across institutions	ORCID, ROR, LEI or local business ID	Researchers and administrators discover and record collaborators (proposed, invited, and actual) using RORs (and other organisation IDs for non-academic partners) and ORCID IDs for people
	Expert reviewers identified using their ORCID IDs	ORCID	Reviewer signs in to their ORCID account, institution requests permission to read information from, and add information to, their ORCID record
	Reviewers connect their ORCID IDs to institutional systems	ORCID	Reviewer signs in to their ORCID account, institution requests permission to read information from their ORCID record
	Reviewers identified and checked for COI etc.	DOI, ORCID, RAiD, ROR, LEI or local business ID	Institutional system queries ROR to disambiguate reviewer and investigator affiliations **AND** queries grant ID database for existing grant awards associated with the applicant and their organisation(s) **AND** queries Crossref/ DataCite for associated outputs etc.
	Application information (previous grants, outputs etc.) shared with reviewers	DOI, ORCID, RAiD, ROR, LEI or local business ID	NB: Data collected from PID systems during previous steps can be reused at this point, or PIDs can be used to provide references for reviewers to investigate as needed

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Submission	Institutional administrators support applicants in preparing their final grant application	DOI, ORCID, RAiD, ROR, LEI or local business ID	Presence of PIDs checked, and PIDs validated
	Institutional staff and systems engage with funder portals/ systems and exchange data	DOI, ORCID, RAiD, ROR, LEI or local business ID	PIDs for entities referenced in applications are shared with funder systems, which can pull associated metadata from registries.
	Sign-off, validation and other checks	ROR	USE RORs to coordinate approvals from collaborating institutions etc.

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Award	Record award decision for successful AND unsuccessful proposals	DOI, RAiD	Local RAiDs for the proposed project are updated with the funding decision, and linked to grant IDs for successful applications.
	Work load allocation	ORCID, RAiD, ROR	Link ORCID IDs for staff and RAiDs for projects to HR to help rebalance workloads AND use ORCID IDs to capture range of contributions to project AND use instrument/ equipment/facility IDs to allocate work.
	Contracts and set-up of any statutory or due diligence requirements		

Process	Activity	Relevant persistent identifier(s)	PID interaction
Project set-up	Loading project on finance and management systems	DOI, ROR	Inclusion of Grant DOIs and funder ROR vital to support management, tracking, and reporting
	Recruitment of project staff, assistants etc.	ORCID, RAiD, ROR	Institution requests ORCID IDs of staff **AND** adds employment and project affiliations to their ORCID records
	Review/finalise project plan and responsibilities	ORCID, RAiD	Map individuals to project tasks using ORCID IDs for staff members and RAiDs for projects
	Additional ethics review and approvals as needed for project set-up	DOI, ORCID, RAiD, ROR	Data collected at earlier stages re-used AND DOI registered for ethics approval **AND** approval added to RAiD record
	Booking in or procuring access to equipment, facilities, information resources etc.	DOI, ORCID, RAiD, ROR	Institutions record associations between individuals (using ORCID IDs), projects (using RAiDs), data management plans (using DOIs), and facilities or organisations (using RORs)

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Project monitoring	Financial statements, income tracking etc.	DOI, ORCID, RAiD	Use PIDs in internal systems to match contributors' ORCID IDs (for tracking salaries etc.) to grant DOIs AND RAiDs for project activities to facilitate reporting (Note these PIDs could also help with reporting activities with multiple funding streams)
	Identifying outputs, publications and potential impact pathways	DOI, ORCID, RAiD, ROR, LEI or local business ID	Institutions register DOIs for outputs (datasets, manuscripts etc.) and capture externally published material using ORCID auto-updates AND add outputs to RAiD records. For tracking pathways to impacts, use appropriate business and organisation identifiers to identify organisations etc. outside academia.
	Tracking project deliverables	DOI, ORCID, RAiD, ROR, LEI or local business ID	Institutions register or record DOIs for outputs AND ORCID IDs for contributors AND RORs (or other appropriate organisation identifiers) AND associate with RAiD records for each project
	Monitoring and reporting to funder, annual financial statements etc.	DOI, ORCID, RAiD, ROR, LEI or local business ID	Use grant DOIs and ROR IDs for both institutions and funders to simplify reporting AND RAiD records to share links to related entities
	Cross-organisational project reports (e.g. European Commission funding, national or international partners...)	DOI, ORCID, RAiD, ROR, LEI or local business ID	Use shared international PID infrastructures to streamline information collection, sharing and analysis.

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Output & outcome tracking	Gathering PIDs for outputs	DOI, ORCID	Using ORCID auto-update, institutions are notified whenever a new DOI is registered for content created by one of their researchers
	Capturing attributions (funder and employer)	DOI, ORCID, ROR	ORCID IDs for authors, ROR IDs for employer affiliations and grant DOIs for funding acknowledgements are included in content metadata and can be harvested and recorded in institutional systems
	Capturing Author's Accepted Manuscripts, preprints etc.	DOI, ORCID, ROR	Publisher registers DOI on acceptance, institutions match author ORCID IDs and ROR IDs for affiliations to discover new content and request AAM from author
	Publishing open access	DOI, ORCID, ROR	Lookup tools and registry queries used to link authors and their ORCID IDs to institutions (via ROR) and funding (via grant DOIs) facilitating APC and budget management

Process	Activity	Relevant persistent identifier(s)	PID interaction
Reporting and compliance	Final and retrospective reporting	DOI, ORCID, RAiD	Connections in RAiD records and associations tracked via ORCID and content DOIs are used to report against specific grant DOIs
	Confirming and documenting policy compliance	DOI, RAiD	Policy information linked to or embedded in grant DOIs used to confirm policy requirements and match to specific outputs or activities
	Provide evidence of management/use of funds for APCs etc.	DOI, ORCID, ROR	Evidence connections to APC budgets using embedded ORCID, ROR and grant DOIs (Note: additional funding for APCs could also have a separate DOI from the original grant)
	Gather automatic updates and notifications on new outputs post-project conclusion	DOI, ORCID, ROR	Institutional systems monitor for new content via Crossref, DataCite, and receive notifications via ORCID auto-update

Preparing application → Internal assesment → Submission → Award → Project set-up → Project monitoring → Output & outcome tracking → Reporting and compliance

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Process	Activity	Relevant persistent identifier(s)	PID interaction
Impact & evaluation	Evaluate project performance against stated goals	DOI, ORCID, RAiD, ROR	Match outputs and outcomes to projects using connections captured in RAiD and institutional systems to simplify collection of core factual evidence
	Identify and record organisations that are licensing research (Intellectual Property, rights management etc.)	ROR, LEI or local business ID	Identify research organisations using ROR and commercial organisations using LEI
	Analyse 'bigger picture' at the portfolio, partnership, or programme level	DOI, RAiD, ROR	Aggregate data from groups of grants, projects or organisations by matching DOIs, RAiDs and RORs.
	Gathering (alt)metrics, indicators etc.	DOI	Gather and analyse references to DOIs for both citations and altmetrics
	Retrospective linking from social/policy/media/commercial/ industry impacts to outputs etc.	DOI, ORCID, RAiD, ROR, LEI or local business ID	Match impacts to research activities and outputs using a range of PID-enabled pathways: look back through public data in ORCID records to get grant DOIs AND look up the associated publications etc. AND Use comprehensive linkage of PIDs via RAiD records to help identify impact pathways etc. AND use DOIs (EIDR) to identify media appearances etc.
	Ongoing assessment of integrity of previous work	DOI, ORCID, RAiD, ROR, LEI or local business ID	Leverage comprehensive affiliation/attribution etc. data in ORCID records, content metadata, citation databases, retractions, errata etc. to identify issues with or challenges to past work