



International | Office of  
Astronomical | Astronomy  
Union | for Development

# Guidelines for projects

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# 1. What is astronomy for development?

The International Astronomical Union (IAU) adopted a strategic plan in 2010 that gave fresh perspective and visible commitment to public engagement and astronomy for development. The Office of Astronomy for Development (OAD) was established in 2011 with the mandate of executing this vision and exploring how astronomy, including its practitioners, skills and infrastructure, might contribute to driving development and improving the conditions for humanity across the globe.

## 1.A The United Nations sustainable development goals

At the OAD, our development goals are framed by the United Nations Sustainable Development Goals (SDGs), which are a set of globally adopted priorities to end poverty, preserve the planet and promote peace and prosperity for all. Our mission is to encourage the astronomy community to work towards these goals through the (astronomy-based) interventions that they execute as IAU-OAD funded projects. It can be difficult to conceptualise how astronomy, an esoteric and specialised science, can contribute to the very immediate and real challenges facing society today. Some examples of how we think this could work are illustrated below.



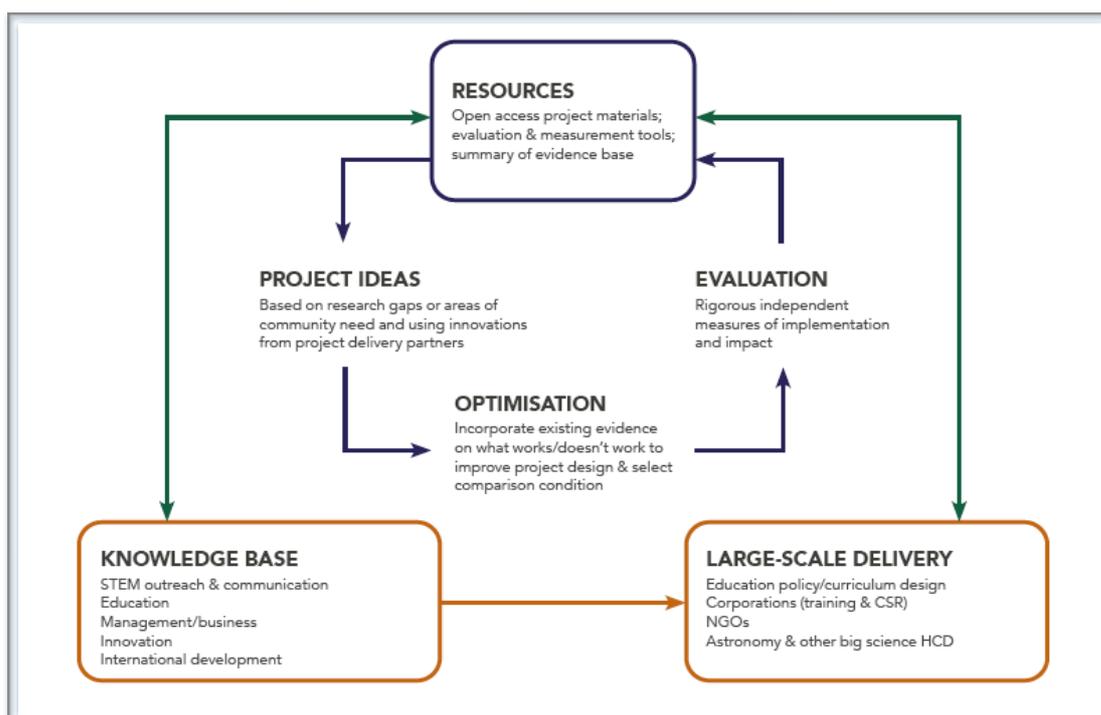
A large number of indicators have been defined by the UN in order to measure progress on the Sustainable Development Goals between now and 2030. Some

datasets and APIs (Application Programming Interfaces) which may be useful for tracking these indicators are available [here](#).

## 1.B Will my project have an impact?

Our philosophy is to build developmental interventions on what is known to work, improve those projects over time, and to avoid interventions that have unintended negative consequences. A simple illustration of how we see this working is shown below – referred to as the OAD impact cycle. The cycle is like a ‘map’ through which projects can:

1. access OAD resources and available scientific evidence on effective science communication, education and international development strategies
2. use these resources to develop scientifically-informed project designs
3. ensure they are not replicating past projects
4. draw from past projects’ lessons when it comes to planning and designing their projects, thus avoiding the repetition of mistakes
5. monitor their project’s implementation, providing a foundation to attract funding, increase the project’s scale and enable other projects to replicate their success
6. evaluate their project’s impact, thus contributing to a growing scientific evidence base on what works and providing evidence of how astronomy can most effectively contribute to development



The impact cycle begins with a project idea, which we turn into a project design through optimisation. During and after the project execution, evaluation helps us understand the impact and adds to the evidence base for future projects. See these pages for more on understanding impact and the OAD impact cycle.

[www.astro4dev.org/?p=16114](http://www.astro4dev.org/?p=16114)

[www.astro4dev.org/funded-projects/impact-cycle/](http://www.astro4dev.org/funded-projects/impact-cycle/)

## 2. I have an idea for a project. What should I know first?

Below are a few steps that might be useful once you've come up with a concept for running a project:

### 2.A Has someone already done this?

Search our database of past projects to see if you've been scooped! When the page is opened, a security warning will show up, you may close the warning Or select "proceed anyway" and proceed to select "Guest Account". You may search through the list of previously funded projects by name, task force, location, keywords etc.

Database of past projects: [https://194.57.221.143/fmi/webd#OAD Projects Funded](https://194.57.221.143/fmi/webd#OAD%20Projects%20Funded) (3)

### 2.B How do I define the problem?

What problem is your project planning to address?

Given the risks of unintended consequences (see the page on [Monitoring & Evaluation](http://www.astro4dev.org/monitoring-evaluation/): [www.astro4dev.org/monitoring-evaluation/](http://www.astro4dev.org/monitoring-evaluation/)), if there is no problem it is probably most helpful not to interfere. The nature of the problem should be clearly defined and its existence confirmed through grassroots knowledge and empirical research. For example, it is unsafe to assume that students in all contexts lack motivation or interest in science. In some places, lack of motivation or interest may reduce science participation rates; in other places, however, students may be extremely keen but unable to continue science participation for other reasons (e.g. lack of financial resources, transportation etc.).

### 2.C Is the intervention needed?

It's worth considering whether our target audience will be accepting of the intervention – we don't want to be imposing our ideas in a place where they are unwelcome – and whether we can make a feasible contribution to solving the problem with the resources available. For help addressing these points see our pages

on [Needs Analysis](#) and [Monitoring and Evaluation](#), or get in touch with the OAD, or one of its [Regional Offices of Astronomy for Development or Language Expertise Centres](#).

## **2.D Is there a Regional Office of Astronomy for Development that can help?**

Search [our Regional Offices of Astronomy for Development and Language Expertise Centres](#) to find the countries/languages they serve and their [contact details](#).

## **2.E Will it work?**

Check the [OAD's knowledge base](#) – a repository of information on what has and hasn't worked for previous astro4dev projects, as well as a [literature based library of evidence](#) for STEM education, outreach and development projects. It's important to think of this before starting the project, so we can [plan measures](#) that will tell us if our projects have succeeded or not.

## **2.F Who are my possible development partners?**

In order to maximise our impact, and make best use of available evidence, the OAD encourages interdisciplinary partnerships. These partnerships push us to think outside our comfort zone, i.e. where the magic happens! Partners could come from within your institution, e.g. with the social science, economics or physics education specialists, or from outside of your institution, e.g. Non-Governmental Organizations or monitoring and evaluation specialists. During Stage 2, proposers will have the opportunity to interact with these development partners, the OAD, and any of the [Regional and Language Offices of the Astronomy for Development](#) that may contribute to the design of their project.

## **2.G More on project design**

Follow [this link](#) for more details on impact-oriented project design.

## 3. How do I test whether it is working or not?

### 3.A Background on monitoring and evaluation

Astronomy for development is concerned with activities that involve people rather than stars. That is to say, Astro4Dev projects are projects that seek to affect human development, not achieve scientific objectives. Astro4Dev projects are thus classed as “**social interventions**”: interventions, policies, practices or programmes that seek to improve social welfare outcomes by addressing social, economic, health, psychology, education or behaviour problems, etc.

Research has shown that interventions often run into unexpected barriers and can produce unexpected negative, as well as positive, impacts. As a result, non-profit organisations and other intervention providers have come under increasing pressure from funders and other stakeholders to provide information about their performance. Monitoring and evaluation refer to a combination of activities and procedures used to effectively measure, report and learn from project performance.

There are two main types of evaluation, focused on different questions listed in the definition above: **Impact evaluation**(summative) and **Process evaluation** (formative). For more details see our [Monitoring & Evaluation page](#).

### 3.B ABCs of surveys

Questionnaires and assessments are essential for both the Impact and Process evaluations mentioned above. For guidance on setting up both surveys and educational assessments (i.e. to measure learning outcomes) see our [Survey & Assessment page](#).

## 4. How do I report back to the OAD?

Projects funded by the OAD are required to submit regular reports of progress as well as a final report of the project. Our reporting guidelines can be found at [this link](#). The OAD is continuing to develop these to make reporting easier for project implementers and more useful for future project proposers.s