

Business Plan 2021-22

Final – 14 May 2021 – Approved by Management Committee 21 June 2021

1. Introduction

Armagh Observatory and Planetarium's (AOP) first Corporate Plan as a unified organisation set out a three-year strategy 2018-21 to achieve stability for the organisation and provide a firm foundation for the future, upon which a greater ambition can be realised.

Much was achieved in the first two years and AOP was looking forward to building on this in 2020-21, however this turned out to be an unprecedented year of uncertainty due to the COVID-19 pandemic. Whilst much of AOP was able to move seamlessly to a remote working model, the public facing and educational offering could no longer be delivered through the Planetarium, requiring AOP to act quickly to change its operating model to maintain its public presence.

AOP also took the opportunity during 2020-21 to revisit its approved Strategic Outline Case (SOC), which sets out a high-level project concept and options for the future development of its site, to ensure it is still relevant in a post-covid world. The exercise concluded that the AOP vision remains both valid and viable. A revised document with minor changes has been approved by DfC and AOP remains focused with confidence and optimism that AOP's contribution locally, nationally and internationally to facilitating and promoting the public understanding of science is a valuable asset to the NI Economy.

This Business Plan for 2021-22 is an interim plan, focused on recovery and rebuilding confidence whilst continuing to deliver outcomes focused on the NI Executive's Programme for Government and supporting DfC's key priorities of anti-poverty; wellbeing and inclusion; sustainability and inclusive growth; and agility and innovation.

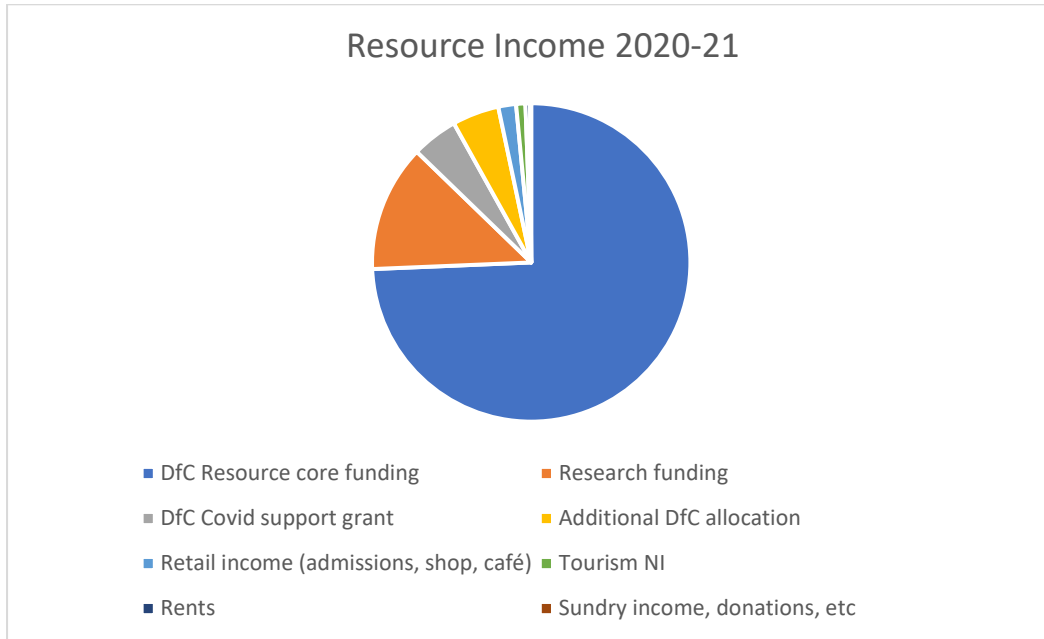
In conjunction with this, AOP is also currently engaging on the development of its own strategy for the next 5 years which it aims to launch in the Autumn.

2. A Snapshot of 2020-21

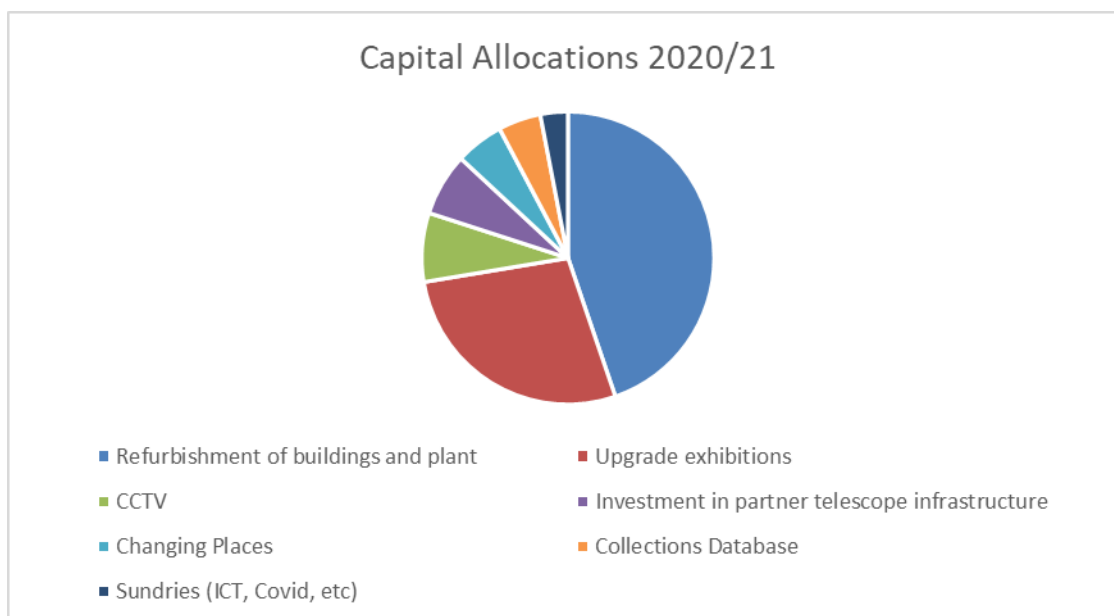
As with all aspects of society AOP operations were dominated by the impact of COVID-19 during 2020-21 with staff for the most part working from home. Whilst AOP was closed to visitors some targets including visitor numbers and income were revised, however even these reduced targets could not be achieved due to the second lockdown. On a positive note, an outdoor Space Lights event in the run up to Christmas was successfully undertaken with significantly reduced capacity and a very successful online education and engagement programme was delivered. Some of the key highlights of 2020-21 include:

- 5 PhD students successfully graduated.
- UKRI 2020 Introductory Course in Astronomy delivered remotely (for the first time) in January 2021 with over **150** participants from both UK and Irish universities.
- Almost **£690,000** research STFC funding secured to support research for the next 3 years (including £99,000 COVID recovery support).
- Science at Home Programme delivered online with **580** posts and activities from across AOP in the last year, including over **50** popular science talks, lectures and interviews with AOP research staff and renowned scientists around the world.
- Cosmic Classroom Pilot delivered for **13** schools reaching **347** pupils before the second lockdown (see map).
- Public Cosmic Classroom to help with home-schooling delivered during second lockdown with **15** sessions run reaching an audience of **460** households.

- **67%** increase in Facebook followers in 2020-21.



- Secured over £90,000 in resource funding for projects which include investment in upgrading our grounds and paths for the enjoyment of visitors and planting new trees to replace those lost in the last few years and upgrading our library resources.
- Secured £17,500 funding from STFC for educational outreach activity that will provide a free resource to 800 schools across NI.
- Secured £22,000 funding from Tourism NI for Recovery Marketing and Website Development.



- Secured £1.275m in capital funding, including projects to maintain our buildings and improve their efficiency and enhance our ability to provide a fun and engaging educational

experience, and to deliver programmes and events to engage a wide range of audiences. Investment has also been made towards international telescope collaborative projects across the world, ensuring AOP's relevance as a major partner and contributor to international research.

3. 2021-22 Priorities

3.1 Improve our International Research Reputation and ability to leverage research funding

Every five years AOP commissions an independent valuation of its research programme, this is an important part of being able to demonstrate the value of AOP research and assist with leveraging funding to support research. In 2021-22 AOP also wishes to attract new talent in the form of Post-Doctoral Research Assistants (PDRA) and PhD students, some STFC funding has already been secured and other funding opportunities will be explored, including opportunities to diversify research activities in the use of data analytics and climate change.

HOW:

- Externally validated Quality Rating for the AOP Research Programme based on the assessment criteria of the 2021 Research Excellence Framework (REF) exercise.
- Support early-career research appointments including the Öpik Fellowship and other longer-term early-career fellowships (subject to available funding).
- Identify opportunities, including collaborative arrangements, to fund additional PhD studentships.
- Maintain our PhD programme and attract talent through a vibrant student community and excellent teaching reputation.
- Continue to initiate strategic academic partnerships to widen the scope of our research, education and heritage activities.
- Develop Data Visualisation Laboratory facilities to enable interpretation of multi-dimensional data sets using immersive techniques and the application of visual data analytics. (capital funding bid).
- Promote careers in STEM and in particular astronomical research and STEM education.

KPIs:

- Obtain a world-leading or internationally excellent rating for 75% of AOP research outputs in the 2021 Research Excellence Framework (REF) exercise.
- Create 3 new PhD scholarships in October 2021.
- 50 Articles published in refereed scientific journals.
- Create 10 work experience/placement opportunities for post primary/third level students across the range of AOP activities.
- Drawdown at least £420,000 in grant income from scientific sources.

3.2 Promote the public understanding of science and the need to achieve an ecologically sustainable future

The Planetarium provides a place where understanding of the global environment of planet Earth and its interconnectedness can be shown and taught through the immersive

experience of the full dome. Allied with our earned reputation as NI's oldest scientific institution, we can provide a credible voice about the importance of science for the understanding of climate change and for investigating and determining the mitigation measures that might be necessary to tackle this global problem. In addition, AOP also promotes the importance of dark skies locally for experiencing our shared human heritage of the wonders of the night sky and of the impact of unnecessary light pollution on the ecology.

HOW:

- Identify opportunities to install modern energy generating facilities that can be used as working exhibits to promote the use of new technologies in curbing global warming and focus on AOP's own efforts to reduce our carbon footprint (capital funding bid submitted).
- Contribute to the UN climate change conference (COP26), to be held in Glasgow in November with a (subject to acceptance of bid proposal and sufficient resources being available to attend the conference).
- Develop a presenter-led planetarium show called "Our Place in the Cosmos".
- Promote engagement with the AOP meteorological programme and community participation in recording the weather (resource funding bid submitted).
- Submit an application for Urban Night Sky Place accreditation to the International Dark-Sky Association by 29 November 2021.

KPIs:

- 2 public events focused on understanding of climate change.
- Accepted as a contributor to COP26.
- Achievement of Urban Night Sky Place accreditation by 31 December 2021.
- Recruit two volunteers to assist with maintaining AOP weather recordings.

3.3 Restore Visitor Numbers and income to pre-Covid levels within 2 years (2019-20 baseline)

At time of preparing this Business Plan there is still uncertainty about the future operation of our visitor programmes, both in terms of date of reopening and safe visitor capacity. AOP believe it is prudent to adopt a two-year plan for recovery focused on maximising weekend, holiday and evening audiences in year one coupled with outreach support for school audiences and developing new Educational programmes and marketing for school visits in 2022-23.

HOW:

- Audience Development and Marketing and PR Strategy to include review of operational model and opening times.
- Targeted event programme for Halloween, Christmas, Spring Mid-term and Easter 2022.
- Plan and market a major summer programme for 2022 (Brickosaurus).
- Introduce a heritage tours programme for the Observatory and outdoor tours of the Astropark.
- Explore opportunity for a Social Enterprise, start-up business provider or similar innovative solution for the Planetarium café.
- Focus on local community and 'Your Observatory and Planetarium' Campaign during 2021-22, including open-days visit to the Observatory and Planetarium.

- Increase overall visibility across NI by continued engagement with TourismNI, enhancing cross-partnerships i.e., with OM dark skies and cross border links with STEM organisations.
- Focus on Educational Outreach Programme including virtual classroom offering including KS3 careers events for 2021-22.
- Explore funding opportunities to improve the outdoor Astropark experience (capital funding bid for a feasibility study submitted).
- Develop new educational programmes and marketing for delivery in 2022-23.
- Provide a range of offerings for all ages, abilities and interests – from a sensory room and pre-school activities to a Data Visualisation Lab to enable interpretation of multi-dimensional data sets using immersive techniques and the application of visual data analytics for more advanced visitors, educators and collaborators.
- Develop new Immersive Technology audio-visual exhibits to reach out also to visually impaired audiences.

KPIs:

- Achieve at least 80% evaluation response ratings of 4 or higher for onsite visits and events held by AOP.
- Attract 12,300 non-school visitors (*30% of pre-covid baseline).
- Deliver 25 cosmic classroom sessions to include 10 paid and 15 free for schools with low educational achievement in STEM.
- Deliver 2 public open days and attract 100 members to a new membership programme for local citizens.
- Admissions and Trading Income level at £92k *30% of pre-covid baseline.

(* may be revised in line with safe capacity guidance)

3.4 Safeguard and maintain AOP's built and natural environment and improve public access and awareness of AOP's contribution to the development of Astronomy in Ireland and worldwide.

AOP wishes to safeguard the future of its built, heritage and natural environment, where the history of the development of science since the Renaissance can still be seen and experienced, remains closely linked to the City of Armagh and is still connected with its surrounding landscape.

HOW:

- Engage a Project Manager to develop an OBC to safeguard AOP's future as a viable and relevant organisation, contributing to the delivery of wider economic, education and social outcomes.
- Identify and pursue funding opportunities to continue to develop tourism and public outreach opportunities.
- Secure funding support for curation and management of historic collections.
- Celebrate significant achievements, anniversaries and events in the world of astronomy.
- Strengthen and establish connections and partnerships from past and present collaborators, in particular across Ireland.

- Focus on local community support via ‘Your Observatory and Planetarium’ Campaign during 2021-22, including open-days visit to the Observatory and Planetarium.
- Bid for additional funds annually for a targeted programme of conservation management activities.
- Develop a volunteering programme.
- Deliver 10 positive news articles in local press.
- Plant a minimum of 5 trees to maintain the shape and essence of the historic landscape.

KPIs:

- Recruit two new volunteers.
- 10 special events/open tours of Observatory.
- Make 3 funding applications to support/contribute to the development of the AOP future vision.

4. Making it Happen – People and Effective Use of Resources

- We will strive to deliver the highest standard of service in everything we do and ensure the highest standards of governance and accountability are applied, continue to employ and invest in motivated and engaged staff, and ensure that our public buildings are safe, accessible and welcoming to all.
- We will launch a Friends of AOP Volunteer Programme, engaging with organisations in the voluntary sector.
- We will develop/launch a comprehensive plan to attract donations from both the general public and the business sector, with different entry levels and rewards.
- We will continually review our operating models and delivery options to ensure our ability to adapt to the changing external environment and deliver best value for money.
- We will invest in our people to maintain their ability to contribute effectively in their chosen field.
- We will continue to work in partnership with our sponsor department DfC through a new partnership agreement to maximise on opportunities and contribute to outcomes aligned to Programme for Government and Departmental priorities.
- We will aim to maintain a fit for purpose organisational structure focused on delivering our objectives.
- We will seek ways to restore key capabilities supporting research and environmental monitoring.
- We will maintain confidence in our ability to manage via effective governance and audit arrangements.
- We will actively seek out opportunities to pursue social contracts for supplies and services, within CPD guidelines.
- We will make decisions based on the best interests of achieving our objectives, whilst evaluating risk and potential positive and/or negative outcomes of options available.
- We will make the best use of available and emerging technology and invest in the continuing development of our ICT infrastructure.
- We will make the best use of our budgets, effectively prioritising available funding and targeting expenditure where it will have most impact on delivering our objectives.

5. Budget 2021-22

INCOME

Sponsor Department Resource Grant-in-Aid	£1,729,000
Admissions and trading income	£91,950
Other income (non-research grants, rents, etc)	£14,439
Total Income / Grant-in-Aid	£1,835,389

DIRECT COSTS

Planetarium direct expenses and trading costs	£74,520
Salaries (Academic & Education)	£869,719
Student costs	£97,910
Library & conservation	£35,120
Travel, meetings, conference & visitor costs	£30,200
Technical consumables, minor technical equipment	£19,200
Other research costs	£15,600
	£1,142,269

GOVERNANCE COSTS

Management committee costs	£3,000
Audit	£29,520
Professional & legal fees	£11,000
Recruitment & training	£13,640
	£57,160

ADMINISTRATION & SUPPORT COSTS

Salaries (management, finance & admin)	£615,815
Heat, light, insurance & rates	£97,670
Buildings, grounds & property maintenance	£151,190
Postage, stationery, telephony & printing	£46,304
Other expenses	£7,320
	£918,299

LESS

Overheads subsidised by external grants	-£196,794
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TOTAL EXPENDITURE	£1,920,934
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SURPLUS / (DEFICIT)

-£85,545

External grant income from scientific organisations	£430,217
Expenditure funded by external grants	
Salaries	£140,502
Student costs	£62,389
Travel, meetings & visitor costs	£28,972
Technical equipment and consumables	£960
Other costs	£600
Overheads funded by external grants	£196,794
	£430,217

Budget Assumptions:

- Baseline resource grant-in-aid budget (including non-recurrent element) will be the same as 2020/21.
- Covid Recovery allocation for gap in income (currently estimated at £85k) will be considered in due course.
- Staffing will be maintained at current level or improved as a result of successful funding applications.
- In year funding bids for projects highlighted will be successful.

6. Key Performance Indicators

By 31 March 2022 (unless otherwise stated) we will have:

No	KPI	Responsible Officer
1	Obtain a world-leading or internationally excellent rating for 75% of AOP research outputs in the 2021 Research Excellence Framework (REF) exercise	HoR
2	Create 3 new PhD scholarships in October 2021	HoR
3	50 Articles published in refereed scientific journals	HoR
4	Secure £420,000 income from scientific sources.	HoR
5	Create 10 work experience/placement opportunities for post primary/third level students	HoR/EOM
6	Organise 2 public events focused on understanding of climate change	Director/EOM
7	Be accepted as contributor to COP26	Director
8	Achievement of Urban Night Sky Place accreditation by 31 December 2021	Director/HCS
9	Recruit 4 new volunteers (2 to assist with maintaining AOP weather recordings)	EOM/OM
10	Achieve at least 80% evaluation response ratings of 4 or higher for onsite visits and events held by AOP	EOM
11	Attract 12,300 non-school visitors (*30% of pre-covid baseline)	EOM
12	Deliver 25 cosmic classroom sessions to include 10 paid and 15 free for schools with low educational achievement in STEM	EOM
13	Deliver 2 public open days and attract 100 members to a new membership programme for local citizens	EOM
14	Admissions and Trading Income level at £92k (*30% of pre-covid baseline)	EOM
15	Deliver 10 special events/open tours of Observatory	Director/EOM
16	Make 3 funding applications to support/contribute to the development of the AOP future vision.	SMT

* may be revised in line with safe capacity guidance