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Planetarium GRAZ: Project Phases and Experiences

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Abstract

The core-team of the Planetarium Project Graz is promoting the planning, concept, creation and maintenance of a state of the art planetarium residing in Graz since the beginning of 2009. The dedicated session (OA3) at the EPSC2010 is aimed at fostering synergies within the European planetaria community and groups concerned with related projects such as building planetaria, public outreach and communication, involving pupils and students in scientific projects and making science more popular in general. This presentation concentrates on describing general phases of planning and approaches for common problems faced within familiar undertakings.

1. Introduction

Planning a planetarium project must and will pass different stages of development, from brainstorming the first concept over finding suitable financial supporters to the building and maintenance phases. At some stage, before the project executing organization(s) is/are found, one has to address financial details, challenges and opportunities related to modern technology.

The general techniques of how to write strategic business plans, or a strategic marketing plan, remain basically straight-forward. Business planning and marketing strategy are mostly common-sense and logic, based on cause and effect.

2. Motivation

Through innovative educational technologies, the Graz Planetarium is going to enrich public with better understanding of the world around us and equip the next generation of explorers and scientists with the skills and desire to learn more about our Universe. In given presentation we share the gained experiences on running the planetarium project and try to motivate other groups and individuals to contribute to educational and cultural infrastructures of their region hence educating the public and introducing science to a broader audience.

3. Basic approach

The specific feature of the Graz Planetarium project consists of the fact that the initiative to build this facility comes from a group of professional space physicists, astronomers and engineers, which are also prepared to provide day-to-day support and management of the planetarium during its operation. The Planetarium in Graz will make a step forward and beyond the traditional planetarium concept. It will be organized in a form of an “innovative triad”, which brings together and keeps interrelated to each other three key functional elements: 1) Education, 2) Research, and 3) Entertainment.

Figure 1: Planetarium Graz concept triangle.

The spectrum of educational offerings in the Graz Planetarium will extend from interactive demonstrations for public up to students graduate level coursework and teachers assistance and professional development programs.

3.1 Working principles

The primary goal of the project team is to use for creation and operation of the Planetarium and all its subdivisions as much as possible the available local a) intellectual potential, b) RTD infrastructure and c) human resources. This in particular concerns the tasks of making the planetarium architect project, house erection, equipping of the planetarium with professional demonstration techniques, providing of competent lecturing staff and preparing of activity programs and shows.

A key goal of the budgetary policy of the Planetarium Graz project is that the whole proposed facility complex is a self-supporting, financially sustainable enterprise which does not need continuous state investments for its operation. At the same time, to keep the planetarium shows, presentations and other services available (financially) for the broad public, it is planned that the facility admission charges will not be more expensive than the price of a usual cinema ticket. Even with such approach the planetarium is expected to be able to generate certain income to pay back the initial external investment and to ensure further growth and development of the facility. The income part of the planetarium will be formed by the following revenue sources:

• Ticket sales for public shows & Immersive Cinema;
• Space Café and Souvenir Shop;
• Scientific research grants;
• Commercial programs/shows (e.g. concerts, art-shows, presentations, etc.);
• Public events (birthdays, parties, conferences, promotions, etc.);
• Facility rentals; • Membership program.
• Donations and Sponsorship programs;

3.2 Location

Special attention is paid to the necessity to have the planetarium complex easy to reach for public, i.e. it should be located in a place with well developed public transport infrastructure, and at the same time, not far from the major intercity transport lines (train, autobahn). The last will ensure easy access to the planetarium for the guests living outside from Graz.

3.3 Selection of equipment

In order to benefit from the modern advanced information technologies and digital visualization techniques the planetarium has to be equipped with the up-to-date advanced projection systems:

(a) Fiber optic starball projector;
(b) Digital projector system, including the 3D immersive cinema complex;
(c) Vector-graphic laser projector system for music/laser/art shows.

3.4 Collaborating organizations

In course of the project development the Planetarium Graz team has established working contacts to several Austrian/Styrian and international organizations and communities which provide their support to the project and intend to collaborate with the Planetarium and its subdivisions in future. Among those are: (1) the European Research Infrastructure EUROPLANET-RI; (2) Steirische Astronomer Union and Johannes Kepler Observatory; (3) Regional union of physics education institutes Physik.Daktik-Graz; (4) Austrian Space Forum; (5) Styrian public education centre.

3.5 Envisaged funding resources

Among the potential funding resources are considered:

♦ European Commission Regional Development Programmes (http://ec.europa.eu/ regional_policy/), and in particular the programme "Regionale Wettbewerbsfähigkeit 2007 - 2013", Aktion 8.2 "Förderung von Leitprojekten und Modellregionen im Kulturbereich";

♦ EU topical programmes – support of education, culture, entertainment, science (e.g., European Commission Framework Progrmmes: FP7, etc.);

♦ Dedicated grants of national and international funds supporting scientific research and development programmes (e.g., European Science Foundation http://www.esf.org/, Austrian Science Foundation http://www.fwf.ac.at);

♦ State and Land grants
♦ National & International Industry sponsorship;
♦ Bank credit;
♦ Private Donations.

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