Pan American Academy of Engineering

Work Plan 2012 –2014

Proposal Presented for Consideration of the Board of Directors and the Full Members of the PAE, by

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President de API

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Diretor Técnico da API

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Preamble

The Pan American Academy of Engineering (PAE), founded in the City of Panama in 2000, is dedicated to recognizing excellence among professional engineers and providing a means for giving expert testimony on matters of public interest to governments, institutions, and professional associations.

In these critical times it is more important than ever those policy-making authorities recognize the value of engineering in the solution of many local and national problems.

Human and economic benefits clearly depend on better education, innovation, entrepreneurship, and sound policy decisions.

This Action Plan seeks to assure that the Pan American Academy of Engineering continues to be a leader in voicing the importance of engineering to our quality of life.
### Global Analysis 2012-2013

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### Global Analysis 2012-2013 (Continued)

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Proposal

The **Work Plan** for the PAE for period **2012-2014** is proposed to be structured around two types of **Work Areas**:

- **Internal Work Area**
- **External Work Area**

In turn, each of these two work areas has four **Strategic Goals**, each one with a specific and clearly defined approach.

Supporting each strategic goal, there is a series of **Tactical Objectives**, which also have a specific and clearly defined focus.

These tactical objectives represent specific **Activities** or **Tasks** that must be executed to achieve the full scope of the work plan.

The Work Plan of the API for the period 2012-2014 is presented next for consideration by the Board of Directors and of the Full Members of the API.
Integration

This strategic goal is focused on increasing the level of integration among the Full Members of the PAE within all countries of America, and across the continent.

Three tactical objectives support this goal:

1. Update the education, knowledge, and professional experience profiles of the Full Members of the PAE.

2. Develop a list of institutional affiliations of the Full Members of the PAE, and of resources and institutional mechanisms for professional practice, education, and research to which they have access.

3. Development of private and public mechanisms for access to, and dissemination of, these profiles and listings within the website of the API.
Growth

This strategic goal focuses on increasing the membership of the PAE.

Three tactical objectives support this goal:

1. Establishment of proactive mechanisms in all countries of the continent for the identification and nomination of distinguished engineers, for subsequent selection and incorporation in the PAE.
2. Establishment of special mechanisms to promote the diversity of the membership in the PAE, particularly the inclusion of a greater number of:
   - Distinguished women engineers
   - Distinguished young engineers
3. Presentation to the Board of Directors and the Full Members of the Academy of this proposal for growth.

Development

This strategic goal is focused on the institutional development of the PAE.

Three tactical objectives support this goal:

1. Increase the effectiveness and the efficiency of the executive management and operational coordination of the PAE.
2. Establish technological mechanisms for organizing regular meetings through teleconferences or video conferences among members of the Board of Directors.
3. Conduct a strategic planning process for the period 2012 - 2018 at the next meeting of the Academy in August 2013, in Colombia.

Self-sufficiency

This strategic goal is focused on the development of financial self-sufficiency of the PAE.

Four tactical objectives support this goal:

1. Establish mechanisms for the execution of contracts with governments, institutions, and continental and global companies to conduct special research, advisory, and/or technical consulting projects.
2. Using the intellectual capital and the professional experience of the Full Members of the PAE:
   - Provide continuing education programs, and
   - Develop educational books and technical publications.
3. Make proposals to institutions and companies with continental presence to support philanthropic investments in support of the vision, mission, and work plan of the PAE.
4. Explore other sources of funding.
External Work Plan
Strategic Goals 2012 – 2014

Projection

This strategic goal is focused on the recognition of the PAE as an institution of high intellectual quality and technology, and on the promotion of their distinguished Full Members.

Three tactical objectives support this goal:

1. Create a special section of the website of the PAE with the education, knowledge, and experience profiles of the Full Members of the Academy
2. Promote the achievements of the Full Members of the PAE so they can be recognized with awards and other types of recognitions at national and international levels
3. Create a digital magazine to inform about the achievements, accomplishments, projects, courses, and publications of the Full Members of the PAE and of special guests
Association

This strategic goal focuses on the consolidation of the API as a respected advisor and a potential active partner with governments, institutions, and continental and global businesses, in initiatives, programs, projects, events, and activities related to Engineering.

Four tactical objectives support this goal:

1. Establish formal links with governments of countries in the Americas
2. Conduct formal working agreements with Pan American and World Organizations
   - OAS, IDB, ECLAC, and OLADE, among other
   - UN, World Bank, among other
3. Conduct formal exchange agreements with National, Continental, and World Academies of Engineering, such as:
   - CAETS
   - ASEAN Academy of Engineering and Technology
   - African Academy of Engineering and Technology
4. Identify, provide support, and actively participate in initiatives, programs, projects, events, and activities related to engineering around the following topics:
   - Professional Practice
   - Engineering Education
   - Research and Development
   - Innovation

Contribution

This strategic goal is aimed at increasing the contribution of PAE to the development and competitiveness of the countries of the Americas.

Three tactical objectives support this goal:

1. Harmonize the work program of the API with related organizations, such as UPADI COPIMERA, WFEO, and others, in the contribution of Engineering to:
   - The Market and GDP
   - The Global Competitiveness
   - Education and Higher
   - The Infrastructure
   - Innovation
2. Promote the implementation of bi-national projects of mutual benefit
3. Promote engineering education in all countries of the Americas through:
• Execution of formal **collaborative agreements with Colleges and Schools of Engineering** at leading universities in the countries of the Americas

• Using the intellectual capital and professional experience of the Full Members of the PAE to:
  o Develop **educational materials** (eg, books, publications, and / or technical videos)
  o Offer **programs, courses, workshops, and conferences for continuing education and/or on specific technical issues**, live, by video, and/or remotely over the Internet

**Value**

This strategic goal is aimed at increasing the **participation of the PAE for the benefit of society** in the countries of the Americas, and thus establish itself as an organization with talented engineers, an operational infrastructure, and a capacity to:

• **Provide answers to the challenges** we face today American countries

• **Transform projects** of infrastructure, energy, water, transport, telecommunications, and environmental improvement, to **higher levels of sustainable development**

• **Improve the quality of life** of their citizens at the level of individuals, families, communities, and organizations, in both the public and private sector

Two tactical objectives support this goal:

1. Establish the PAE as a **focal point and an open forum for creativity, innovation, design, and entrepreneurship** in support of the development of new **products, processes, services, and business models** based on engineering

2. Establishing **Communities of Practice** through **Thematic Groups** organized around the following **Strategic Concepts**:
   • Engineering for the Americas
   • Engineering Education
   • Science, Technology, and Innovation
   • Prevention of Natural Disasters
   • Improvement of Climate Change
   • Initiatives against Corruption
   • Energy and Alternative Sources
   • Telecommunications