

SUCCESS THROUGH SYMBIOSIS

HOW WE CONTRIBUTE

Annual Report 2017



THE WORLD INSTITUTE FOR NUCLEAR SECURITY

Promoting nuclear security best practices and security leadership around the world



“Real symbiotic relationships only form, and are only successful, when they are created to address a real challenge that could not have been solved by the partners acting alone.”

– RAFE SAGARIN, Author of *Natural Security: A Darwinian Approach to a Dangerous World*



Symbiosis is the process by which different species of biological organisms form partnerships or associations to bring benefits to both parties; the benefits can take many forms, but most are about improved outcomes. One particular type of symbiosis is called hybrid vigour; this is where the offspring (i.e. the products of the partnership) exhibit better qualities and greater adaptability.

Why is this relevant to nuclear security and the efforts being made to prevent nuclear and other radioactive materials from being used for terrorist purposes?

Because the threat of nuclear terrorism is real and becoming more complex and challenging every year as the range of threats increases. If the international community wants to succeed in preventing these threats, it has to understand the benefits of symbiosis and act accordingly. No State, international organisation, industry or NGO can address the threats on their own. Doing so requires concerted actions based on an underlying belief that real partnerships are essential for success.

Many statements support this view—both in relation to the nature of the threat and to the need for meaningful cooperation. The question is how we might go about measuring and assessing the level of cooperation to establish whether or not the symbiosis is real.

In 2016, WINS identified ten strategic external objectives whose achievement by 2020 would greatly strengthen nuclear security on both a macro (international) and micro (organisational) level. Achieving these objectives requires all stakeholders to work together in a symbiotic, mutually beneficial relationship because they cannot be achieved alone.

This report highlights how WINS contributed to the ten objectives in 2016 through our commitment to providing services that focus on high quality knowledge exchange and professional development and certification for nuclear security management. It also lays out our strategic targets for 2017.

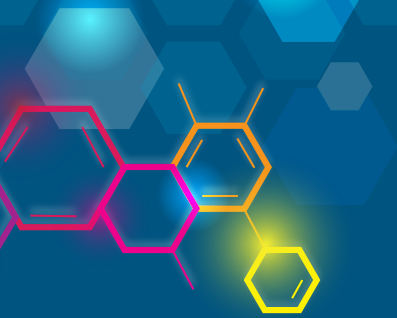


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CHAIRMAN'S LETTER



William H. Tobey

In 2016, WINS continued to advance nuclear security around the world and across an expanding range of activities.

In developing and promoting the use of best nuclear security practice, WINS continues to make signal progress. Membership now totals almost 3,700 individuals in more than 120 countries. Importantly, 96.5% of WINS members and workshop participants report that they have modified approaches to nuclear security because of WINS, a mark of tangible achievements.

This work also extends beyond individuals to cooperation with key organizations. The Nuclear Industry Steering Group for Security is a very positive development, which WINS supports, and which will

strengthen relationships between the private sector, the International Atomic Energy Agency (IAEA), and WINS. These partnerships are indispensable to effective action, as today's best practices are tomorrow's standards.

The WINS Academy, aimed at ensuring demonstrable competence among those responsible for the security of fissile materials, is training and certifying an increasing number of individuals from both civil and military sectors. At the 2016 Nuclear Security Summit, world leaders recognized the importance of the Academy mission, and later supported it in IAEA Information Circular 901.

WINS continues to broaden its support from industry, governments, and philanthropic foundations. This cross sector international support recognizes that WINS is an organization that eschews politics and gets on with a mission vital to international security.

WINS also practices what it preaches, by adhering to best management practices, routine external and self assessment, seeking and receiving International Organization for Standardization (ISO) certifications, and undergoing rigorous financial and substantive audits. In this regard, Board members are committing to specific actions to advance the WINS mission.

Roger Howsley and the WINS staff are to be congratulated for remarkable achievements.

THE WINS BOARD



Dr. John Barrett

President and CEO of
the Canadian Nuclear
Association (CNA)



Mr. Duncan Hawthorne

Chief Executive Officer,
Horizon Nuclear Power



Dr. Paul Harding

Advisor to CEO URENCO
Ltd in the field of
small and medium
sized reactors (SMR)
development



Dr. Joan B. Woodard

Executive Vice President
Emeritus of Sandia
National Laboratories



Full biographies of WINS Board members are available on the WINS website.

THE EXECUTIVE DIRECTOR'S REPORT



Dr. Roger Howsley

In this eighth annual report from WINS, we have summarised a year full of developments and outcomes. We hope you find it both informative and enjoyable to read.

In 2015, we established ten strategic outcomes to be achieved by 2020. In this report, we discuss the progress we made in 2016 toward this goal. Of particular note is the recognition WINS received at the Nuclear Security Summit when twelve States signed a Joint Statement on Certified Training. The Statement specifically acknowledges the role that the WINS Academy has played in promoting certified training for personnel with accountabilities for nuclear security and provides assurances of continued support for the Academy.

We were delighted to continue our close collaboration with the IAEA, to sign cooperation agreements with the Institute for Nuclear Materials Management (INMM)

and the World Nuclear Transport Institute (WNTI), and to help establish the new Nuclear Industry Steering Group for Security (NISGS). Such relationships demonstrate our strong support for working together in a genuine spirit of cooperation to meet the complexities of the evolving threats to all nuclear and other radiological materials and the need to implement effective and efficient security arrangements.

Underpinning all our work are the quality management systems and the professionalism and commitment of the WINS staff that define our culture. In 2016, we retained our ISO certifications for quality management, met all requirements of the external financial auditors, and invested in personnel development programmes for staff.

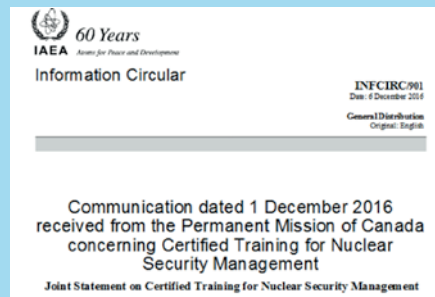
We want to thank all of the supporters and funders who share our conviction that being demonstrably competent in nuclear security lies at the heart of the effort to improve the effectiveness of security and build international resilience and capacity. We look forward to 2017 with a sense of excitement about additional opportunities to achieve our strategic goals. This includes working with the World Association of Nuclear Operators on peer review and with the civil aviation sector on benchmarking security arrangements between the aviation and nuclear industries.

We are always available to answer any questions or to provide clarification; if you are not a WINS member yet, please join our growing community of security practitioners. They currently number almost 4,000 and come from 120 countries.

WINS HIGHLIGHTS & ACHIEVEMENTS IN 2016



- ✓ WINS was recognised by 12 States in the 2016 Nuclear Security Summit (NSS) Joint Statement on certified training for nuclear security management.
- ✓ The IAEA published INFCIRC/901, which recognises the WINS Academy and the importance of certified training.
- ✓ Memoranda of Understanding were signed with the Institute for Nuclear Materials Management (INMM) and the World Nuclear Transport Institute (WNTI)
- ✓ The Nuclear Industry Steering Group for Security (NISGS) was launched.
- ✓ The WINS Academy curriculum was completed and made available online. We had 745 participants and 182 academy graduates at the end of the year.
- ✓ The new WINS Academy e-Learning platform and WINS Academy ambassador programme were launched.
- ✓ All major programmatic goals were achieved, and good progress was made with Academy enrollment and certification (although exam-taking was slower than expected).
- ✓ Quality management recertification to ISO standards was obtained from Quality Austria, and our financial controls and accounts were independently audited by Deloitte.
- ✓ The professional development programme was implemented for all WINS staff.



WINS GLOBAL SURVEY OF STAKEHOLDERS

In 2016, we conducted a global survey of stakeholders and asked participants to respond to ten statements using a 9-point scale that ranged from strongly agree (light blue) to strongly disagree (dark blue). The results and overall trends are shown below. There was very strong agreement on all of the questions except that stakeholders thought it was much more likely that a security incident would occur in a country that was not their own

1 A significant incident involving nuclear material or radioactive sources will occur somewhere in the world in the next five (5) years.

INCREASING AGREEMENT →



2 A significant incident involving nuclear material or radioactive sources will occur somewhere in your country in the next five (5) years.



3 There should be a regulatory requirement for professional certification for personnel with accountabilities for nuclear security.



4 The IAEA's nuclear security programme should promote structured professional development and voluntary certification.



5 Regulators, operators, police and responsible government departments should publish meaningful governance reports about the "corporate" oversight of their security programmes.



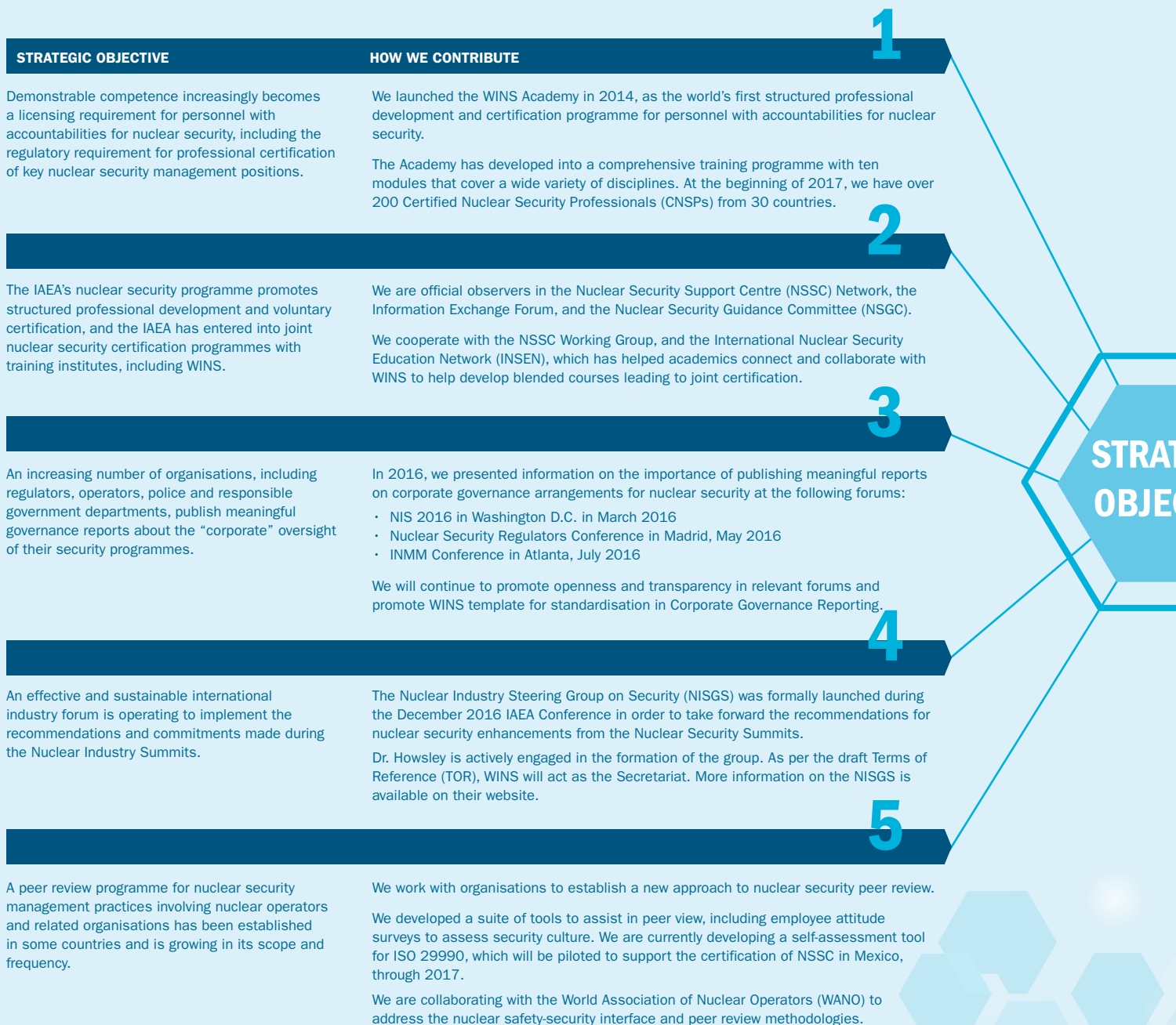


- 6** Peer review programmes for nuclear security management practices involving nuclear operators and related organisations should be established.
- 7** Nuclear-related organisations should see nuclear security as a strategic issue (as is nuclear safety) rather than as a regulatory burden.
- 8** Security programmes and security regulations should be performance-based.
- 9** Nuclear safety and security should be integrated, and more of the nuclear safety-related disciplines and management attitudes should be used to enhance nuclear security.
- 10** Cyber security and physical protection arrangements should be properly integrated as part of an all-risks approach to the security programme.

INCREASING AGREEMENT 



PROGRESS AGAINST THE STRATEGIC OUTCOMES



As an integral part of the WINS Strategy, we established 10 strategic objectives, which we share with a number of our key stakeholders. We are fully aware that the achievement of our 2020 strategic objectives relies on the combined efforts of many other organisations and external factors upon which WINS does not have direct influence. Our priority is to ensure that our activities are linked to our strategic objectives and driven by performance objectives. Whilst measuring progress against our objectives, we have contributed to those we can influence. Following is a brief summary of our contributions to the overall progress of these 10 objectives.

STRATEGIC OBJECTIVE

6

STRATEGIC OBJECTIVE

Nuclear security is increasingly seen as a strategic issue for nuclear-related organisations (as is nuclear safety) rather than as a regulatory burden.

HOW WE CONTRIBUTE

In 2016, we also began analysing return on investment (ROI) for nuclear security expenditure.
We organised an International Workshop on Countering Home-Grown Violent Extremists (HVEs) in the Nuclear Sector in May 2016 in London.

7

Security programmes are subject to the business disciplines of effectiveness (performance tested), and efficiency and security regulations are performance-based.

In 2016, we started analysing security expenditure at nuclear facilities in relation to the return on investment. A lot can be learned from the security expenditure approaches of other industries. The themes that are common across all of the security expenditure literature reinforce the importance of core concepts in thinking about and controlling security expenditure.

8

Nuclear safety and security continue to coalesce, and more of the nuclear safety-related disciplines and management attitudes are used to enhance nuclear security.

We contributed to the integration of nuclear safety and security through publications:

- WINS Best Practice Guide on An Integrated Approach to Nuclear Safety and Nuclear Security; and
- WINS Best Practice Guide on Nuclear Security Culture.

9

Cyber security and physical protection arrangements are properly integrated as part of an all-risks approach to the security programme.

We are developing a WINS Academy elective course on Cyber Security (to be delivered by mid-2017).

10

Much higher quality nuclear security workshops, events and related best practice guides have been implemented, including some new ISO publications, and professionally-facilitated and focused meetings are the norm in the sector.

We demonstrated our commitment to ISO quality standards by obtaining and maintaining ISO 9001 and ISO 29990 certification on our quality management system. We promote partnering with COEs that are ISO certified, and develop the methodology to assist partners in ISO certification.
We ensure that our workshops, webinars, meetings and other events are professionally facilitated (over 80 to date).

SHARING OPERATIONAL EXPERIENCE



WINS WORKSHOPS, ROUNDTABLES AND WEBINARS

WINS' workshops, roundtables, webinars and membership forums provide a platform for WINS members and other nuclear security practitioners to exchange their experiences and lessons learned on implementing security programmes for nuclear and other radioactive materials that are in use, storage and transport. (Over 85% of participants who attend our events pay entirely for their own costs.)

Our overall goal is to help those with nuclear security accountabilities increase their awareness of the credible threats, possible consequences of malicious acts, and

best approaches for implementing cost effective security arrangements.

To enable our participants to benefit as much as possible from our workshops, we are committed to making them innovative, interactive and engaging. We also take great care to invite professionals from around the world to share their knowledge and expertise. In 2016, 356 people participated in our workshops, and 98% of them expressed a very high level of satisfaction; 93% of them would recommend a WINS event to others.

2016 WINS EVENTS IN NUMBERS

In 2016, WINS conducted **10** workshops, roundtables and other events in **8** countries, including **Canada, China, France, UAE, UK and the US**

“The CNSC found the *Night at the Theatre* event to be extremely realistic and thought provoking in the scenario that it presented. The participation of the audience was testament to the connection the actors made with those actually responsible for nuclear security in their respective countries. What an excellent way to convey a message.”

– THE CANADIAN NUCLEAR SAFETY COMMISSION



HIGHLIGHTS OF 2016

1 NUCLEAR SECURITY SUMMIT: ENHANCING RADIOLOGICAL SECURITY (GIFT BASKET MEETING), 18-19 January 2016, Oslo, Norway

In preparation for the 2016 Nuclear Security Summit, the US and Norway asked WINS to facilitate a workshop to discuss how signatory countries have met or will meet the commitments of the Radiological Security gift basket. The workshop was attended by 47 participants from 17 countries and one International Organisation.



2 THE SECURITY OF GAMMA IRRADIATION FACILITIES USED FOR INDUSTRIAL AND RESEARCH IRRADIATION AND STERILIZATION, 19-21 April 2016 in Xianyang, Shaanxi, China

This workshop had two objectives. The first was to better understand the roles and responsibilities of various stakeholders (manufacturers, operators, regulators) in improving the security of industrial irradiators. The second was to listen to the experiences and lessons learnt by those who have strengthened the security of their facilities.



3 A NIGHT AT THE THEATRE – “A FALSE SENSE OF SECURITY” 6 December 2016, Vienna, Austria

The UK Department for Business, Energy & Industrial Strategy (UK BEIS) sponsored WINS and AKT Productions’ “A Night at the Theatre.” Over 100 diplomats and representatives from government, industry and academia from 25 countries joined together to enjoy an evening of theatre written by Andy Powrie, Founder and Director of AKT, and Roger Howsley, Executive Director of WINS.



SHARING OPERATIONAL EXPERIENCE



“WINS events and products are produced with a very high level of professionalism and great attention to detail. The staff are extremely dedicated and knowledgeable and are most professional and courteous in their interactions with WINS members. It is a pleasure to work with WINS and the Institute is playing a significant role in shaping and improving Nuclear Security worldwide.”

- WINS MEMBER

WEBINARS

In March 2016, WINS conducted a webinar on Liability to discuss the findings of the Workshop on Liability Risk Management in the Event of a Malicious Incident Involving Radioactive Sources.

Speakers: John Miller, International Isotopes (USA) and Kathryn Rauhut, The Stimson Center (USA)

In September 2016, WINS conducted four master class webinars following the May workshop on Countering Homegrown Violent Extremism in the Nuclear Sector that was held in London. As of the end of 2016, they have been viewed close to 600 times. The webinars were professionally facilitated by Mark Webster, from Chevron Media, and featured the following presentations:

- **The In Amenas Terrorist Attack: Lessons for the Nuclear Industry** – Jim Snyder (USA), Snyder Law Group LLC; former Director, Worldwide Security, Apple
- **Radicalisation Threat Mitigation: Behavioural Observation** – Joe Stainback (USA), Research Associate Professor, University of Tennessee
- **Emerging Radicalisation Threats to the Nuclear Industry** – Raffaello Pantucci (UK), Director of International Security Studies, Royal United Services Institute for Defence and Security Studies
- **Integration of Nuclear Safety and Security** – John Donald (UK), Superintending Inspector, Office for Nuclear Regulation.

WHAT'S NEXT?

In 2017, we will conduct at least 12 additional workshops, roundtables and in-person training courses. We plan on broadcasting four webinars on relevant topics throughout the year.



WINS MEMBERS

- Our members are drawn primarily from industry, government, law enforcement, and academic and research institutions. We provide a forum for our members to exchange ideas, network, promote leadership and enhance their professional skills. By the end of 2016 our membership had increased by an additional 560 members and totalled 3,661 in over 120 countries, including both individual and corporate members.
- In July 2016, Dr Roger Howsley and Larry Satkowiak, President of the Institute of Nuclear Materials Management (INMM), signed a memorandum of understanding (MOU) in Atlanta, Georgia, during INMM's 57th annual meeting. WINS and INMM will now cooperate together to share their knowledge through the WINS Knowledge Centre, peer reviews, and organisation of joint events. They will also promote each other's activities among their respective members.

“WINS has improved my knowledge of nuclear security. After taking courses with the WINS Academy, my thinking on nuclear security changed, and I now understand that Nuclear Security is everybody's responsibility.”

– SIMPHIWE XASO, SOUTH AFRICA,
WINS ACADEMY PARTICIPANT



SHARING OPERATIONAL EXPERIENCE



ANNUAL SURVEY RESULTS

Member satisfaction with the quality of our services is extremely important to us. Therefore, we conduct an Annual Satisfaction Survey to benchmark our performance. Following are the results from our 2016 survey, along with the changes (in percent) from our 2015 survey.

QUESTION	PERCENTAGE AGREE 2016-2017 AND % CHANGE FROM THE PREVIOUS YEAR
1. I benefit from WINS Membership.	97.6 (+0.9)
2. WINS is a valuable forum.	99.8 (+0.8)
3. The WINS guides are effective for self-assessment.	99.7 (+1.5)
4. The WINS guides cover relevant topics.	99.5 (+0.2)
5. WINS workshops are innovative.	97.5 (-0.7)
6. Attending a WINS workshop was time well spent.	94.7 (-1.8)



“Since I joined WINS as a member, I have benefited from topics covered every month and have been able to influence some policies on nuclear security as a member of Nuclear Security Working Group for the Department of Energy of South Africa, as Security Advisor representing the South African Police Services.”

- STANLY LETOMPA, SOUTH AFRICA, WINS MEMBER

7. I have modified approaches to security because of WINS.	96.5 (+1.7)
8. The WINS website is useful.	99.3 (+0.2)
9. I am enrolled/have completed the WINS Academy Certification Programme for Nuclear Security Management. (New Question)	41 % of members that completed the survey are enrolled in the WINS Academy.
10. My competence in nuclear security has improved because of the WINS Academy courses. (New Question)	98.9% of enrolled participants who completed the survey agree that their competence in nuclear security has improved because of WINS Academy courses.
11. I recommend the WINS Academy Programme to my colleagues with accountabilities for nuclear security. (New Question)	100% would recommend the WINS Academy Programme to their colleagues with accountabilities for nuclear security.

WINS Suite of Services

KNOWLEDGE CENTRE



Our Knowledge Centre provides an archive of the most up-to-date, and highest quality information on nuclear security for our members and Academy Alumni. Currently comprising 370 items, it is a single repository for all WINS publications and nuclear security-related resources, including our international Best Practice Guides, Special Publications, workshop and event reports, marketing material, strategy papers, newsletters, webinars, videos, and external publications.

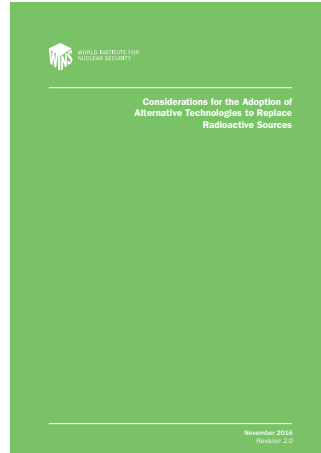
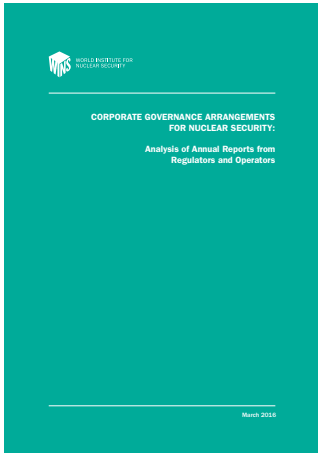
WINS INTERNATIONAL BEST PRACTICE GUIDES

In 2016, WINS revised 7 previously published international Best Practice Guides (BPGs):

- 1.4** Nuclear Security Culture
- 3.2** Human Reliability as a Factor in Nuclear Security
- 4.2** An Integrated Approach to Nuclear Safety and Nuclear Security
- 4.4** Nuclear Material Accountancy and Control in Support of Nuclear Security
- 5.1** Security of High Activity Radioactive Sources (English and Chinese)
- 5.2** Security of Well Logging Radioactive Sources
- 5.3** Security of Industrial Radiography Sources

WINS SPECIAL PUBLICATIONS

WINS believes strongly that nuclear facility operators and regulatory authorities should provide confidence-building assurances about the effectiveness of their security governance arrangements. Such assurances enable external stakeholders—including other governments and the local and international community—to understand how well the nuclear security oversight arrangements are working. In March 2016, we published our second Special Publication on Corporate Governance Arrangements for Nuclear Security. This study reviewed the regulatory and corporate governance arrangements for nuclear security amongst the 53 States that attended the 2014 NSS. Its objective was to obtain a comprehensive overview of how well nuclear security is being reported by regulators and operators, identify areas of concern, highlight good reporting practices, and make recommendations for the future.



In November 2016, WINS released a revised version of the publication, *Considerations for the Adoption of Alternative Technologies to Replace Radioactive Sources*. In this special publication, we describe the advantages and disadvantages of several alternative technologies used in medicine, industry, research and academia. Our goal was not to take a particular stance on the issue or to make specific recommendations, but to provide guidance on whether it would be appropriate to replace some or all radioactive source technologies with an alternative—particularly if the replacement is more effective, less burdensome and less costly.

IN 2016

Over **7,200** publications downloaded

1,575 BPGs printed in 2016

7 revised BPGs

2 Special Publications

MOST-FREQUENTLY DOWNLOADED BPGs IN 2016:

- Nuclear Security Culture
- Effective Security Regulation and Implementation
- Performance Metrics



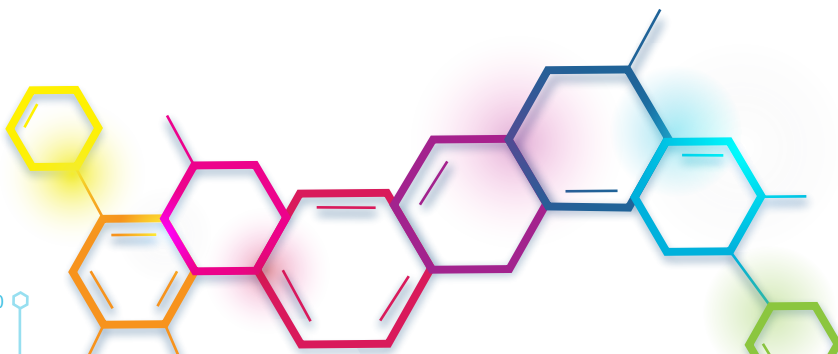
The WINS Academy is the world's first international certification programme for nuclear security management. It is also the only nuclear security initiative that links across governments, industry and civil society. Our contributions are increasingly gaining recognition and support from countries and organisations around the world.

INTERNATIONAL SUPPORT FOR THE WINS ACADEMY

One of the gift baskets offered during the 2016 Nuclear Security Summit (NSS) was titled the Joint Statement on Certified Training for Nuclear Security Management. The gift basket—which was jointly led by Canada and the United Kingdom and signed by Finland, Hungary, Indonesia, Kazakhstan, Mexico, the Netherlands, New Zealand, Norway, Thailand and the United States—recognises WINS' efforts to promote certified professional development for nuclear security. The Statement was subsequently published as IAEA INFCIRC/901 in December 2016.

“This gift basket underscores the importance of the World Institute for Nuclear Security (WINS) and the certified training courses provided by the WINS Academy for managers and personnel involved in nuclear security. Along with other States that have provided support to the Academy, Canada encourages the further expansion of the WINS Academy’s certification program.”

– NATIONAL STATEMENT OF CANADA, 1 APRIL 2016



THE WINS ACADEMY PROGRAMME

The WINS Academy programme consists of a Foundation Module plus nine elective modules, all of which can be completed entirely online. After participants complete the Foundation Module and at least one elective of their choice, they sit for an exam in one of 5,100 accredited test centres located in 180 countries. Those who successfully pass both examinations receive the WINS Certified Nuclear Security Professional (CNSP) accreditation and join the network of WINS CNSP Alumni.

ENROLMENT AND CERTIFICATIONS

The WINS Academy has now grown to 745 individuals from 81 countries. As of the end of December 2016, we had 182 CNSPs (Foundation + elective completed) from 36 countries.

We believe that the growing numbers of tested and certified practitioners provide concrete evidence that the WINS Academy is increasing professional security capacity around the world.

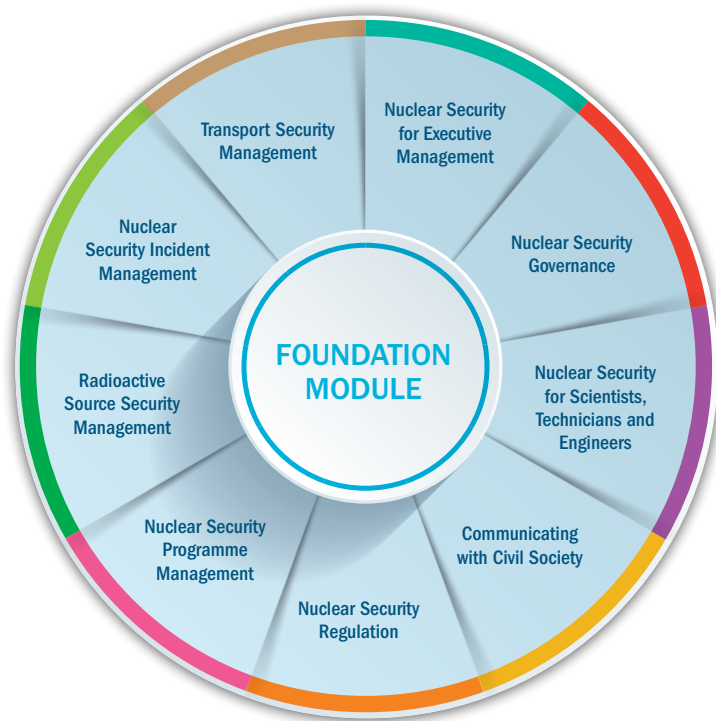


Figure 1. Academy Courses



ACADEMY MODULES RELEASED IN 2016

We completed all ten modules for the WINS Academy in 2016. Developing the curriculum and course materials involved a tremendous effort on the part of consultants, peer reviewers, Academy participants who provided essential feedback, and the collective labours of the WINS staff. In total, we have now published approximately 1,750 pages of what we believe is the highest-quality nuclear security professional development and training material in the world.

In 2016, we published three new Academy electives:

- Elective for Nuclear Security Programme Management
- Elective for Radioactive Source Security Management
- Elective for Nuclear Security Regulation



We also completely revised the core Foundation Module. The revision drew on feedback from peer reviewers and course participants as well as the experience we have gained in developing all ten courses. As a result, the scope of the revised module has broadened and now covers both nuclear materials and other radioactive materials, new and emergent threats, information security, the impacts of all four Nuclear Security Summits, the Amended CPPNM, and international developments for nuclear security training. The module also provides more examples, has updated statistics, and incorporates a revised self-assessment structure.

In November 2016, we partnered with Bruce Power in Ontario, Canada, to co-host a training event on Security Incident Management. Bruce Power—which had previously reviewed and endorsed the Academy Elective on Security Incident Management—gave all event participants the opportunity to enrol in the course and provide their feedback on it. We have now received these peer reviews and will subsequently revise this Elective in 2017 to reflect participants' contributions.

We also plan to partner again with Bruce Power in future training events through their Centre of Excellence.

LAUNCH OF NEW E-LEARNING PLATFORM

WINS has upgraded its e-Learning platform to a new Learning Management System (LMS) called Mobius. (See Figure 2.) Some of Mobius' advantages include:

- A modern user interface with the ability to integrate video and media;
- Expanded reporting and data collection tools; and
- Full editorial control and customisation features.

We have successfully migrated all courses and enrolled participants onto the new platform. In 2017 we will integrate the databases that support WINS Academy enrolment and purchasing to make the process more efficient and user friendly.

The screenshot displays the WINS Academy LMS interface. At the top, the user is logged in as 'Dan Johnson'. The navigation bar includes 'Home', 'Help', 'English (en)', 'My courses', and a search function. The breadcrumb trail shows the current location: 'Home > Courses > M01: Foundation Module > The Foundation Module > Unit 2: The Nuclear Industry in Context > 2.2 The Nuclear Fuel Cycle and Nuclear Technology'. A 'Lesson menu' on the left lists various resources for the current lesson. The main content area features the title '2.2 The Nuclear Fuel Cycle and Nuclear Technology' with options for 'Preview', 'Edit', 'Reports', and 'Grade essays'. Below the title is a text introduction to the nuclear fuel cycle, followed by a circular flow diagram titled 'The Nuclear Fuel Cycle'. The diagram shows the stages: Mining, Conversion to U3O8, Enrichment, Fuel fabrication, Reactor, Spent fuel, Reprocessing, Disposal, and Storage. A source attribution to the World Nuclear Association is provided. At the bottom, a note instructs users to click through bars to learn about each stage and its security considerations.

Figure 2: Mobius LMS



WINS ACADEMY ALUMNI

In late 2015, WINS launched the Academy Alumni Network (Figure 3), an interactive platform dedicated to the professional development of graduates who have successfully passed their certification examinations. Through this platform, CNSPs connect to each other, learn about recent nuclear security developments and upcoming nuclear security events, and engage in expert discussions. In 2016, we sponsored two Alumni Challenges (February and September) that invited CNSPs to address in writing how they have used what they learned in their Academy courses at work. The first place winner of each challenge was invited to attend the WINS workshop of his or her choice, and the second and third place winners were offered scholarships to complete a WINS Academy elective module of their choice.

In addition, we have published ten Alumni newsletters and sponsored three Alumni Feedback surveys. The purpose of the surveys was to measure the impact of certification on our Alumni's careers and to evaluate the overall impact of the Alumni Network. By the end of December 2016, we had received 191 responses in total. The results are as follows:

- **94%** of CNSPs say that certification has had a positive impact on their professional image/reputation.
- **91%** say the WINS Academy Programme is relevant for improving the competence of nuclear security professionals.
- **91%** say that earning a certification from WINS is valuable for their career development.

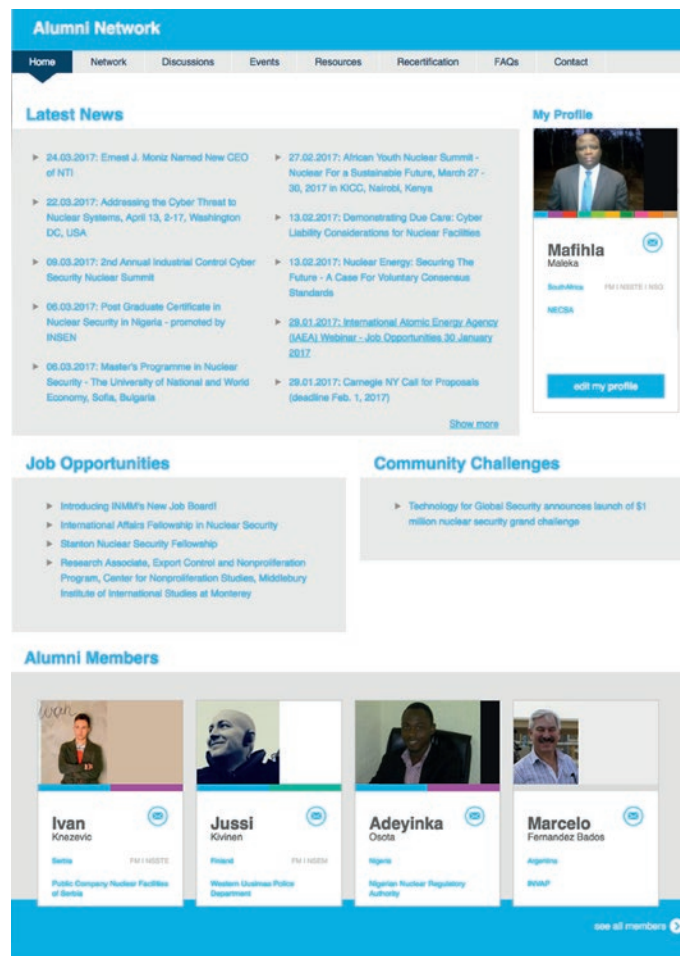


Figure 3: WINS Academy Alumni Network



WINS ACADEMY AMBASSADOR PROGRAMME LAUNCHED

We introduced the WINS Academy Ambassador Programme in the autumn of 2016. To do so we invited CNSPs to act as volunteers in promoting WINS Academy training and certification in their respective countries. These five CNSPs are our first Ambassadors:



FRANCE

Denis Scheehl
Safety Coordinator
AREVA Projects



SERBIA

Dr. Ivan Knezevic
Research Professor,
Nuclear Safety Officer
Public Company



INDIA

Dr. Alpana Goel
Director/Head
Institute of Nuc.
Science & Tech.



NIGERIA

Adamu Abdul
Assistant Director
Nigerian Nuclear
Regulatory Authority



MOROCCO

Taha Laghouazi
President, University
Ibn Tofail INMM
Student Chapter

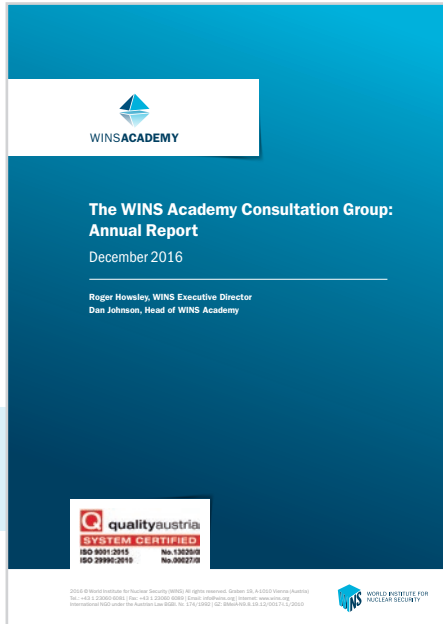
GRADUATE EXPERIENCE BOOKLET

WINS also published a revision of its Graduate Experience Booklet in 2016. The publication features feedback from over 50 WINS Alumni who believe that the knowledge they have gained through the WINS Academy programme is both inspiring and valuable. Over time, we plan to consistently review employment and other data to measure the effects of the Academy programme on our Alumni's professional lives, as well as on the organisations that employ them.



WINS Suite of Services

TRAINING AND CERTIFICATION



THE ACADEMY CONSULTATION GROUP (ACG)

The Academy Consultation Group is comprised of Academy contributors, a diverse group of representatives from States, industry and foundations. ACG members are given regular updates on the Academy's developments, including course releases, partnership arrangements and participation rates.

WINS has also asked that ACG members work as Ambassadors within their communities to help the Academy become a sustainable success and to encourage States to meet their commitments for ensuring that personnel with accountabilities for nuclear security are demonstrably competent.

WHAT'S NEXT?

New WINS Academy Elective on Cyber Security – coming end of 2017!

As current guidance on cyber security for nuclear facilities is very technical and not structured in an appealing way for decision makers at nuclear facilities, we plan to produce a new Academy Elective on Cyber Security that focuses on how assurances can be provided to senior management that the systems are resilient to attack (i.e. the hierarchy of policies, procedures and leading performance metrics that work).



WINS Suite of Services

EVALUATION



SELF-ASSESSMENT

WINS strongly supports the need to evaluate and measure programmes, processes, plans and more. This is why all of WINS' Best Practice Guides include practical self-assessment questionnaires and benchmarking opportunities that enable stakeholders to assess the maturity of their security arrangements and security culture. In addition, the Academy Modules provide numerous Questions for Reflection to encourage self-evaluation.

SURVEYS

In 2016, we reviewed and published guidance on how to conduct employee perception surveys. In addition, a major nuclear operator engaged us to help them conduct employee surveys and peer reviews on their security culture. The project involved designing specific questionnaires and associated software to gather anonymous employee responses and conducting a statistical analysis of the results. In undertaking this work, we drew on IAEA recommendations and INPO guidance dealing with the traits that determine an effective nuclear security culture.

PEER REVIEW

We are especially grateful to WANO for agreeing to advise us on their approach and experience relating to nuclear safety and operations peer review. Such information will enable us to establish best practices for the corporate review of security management. The experience we gain through these efforts will enable us to improve the process and to develop tools that can be applied across the nuclear sector to assess security culture and identify areas where management attention is needed. We will publish our report on this subject in late 2017.

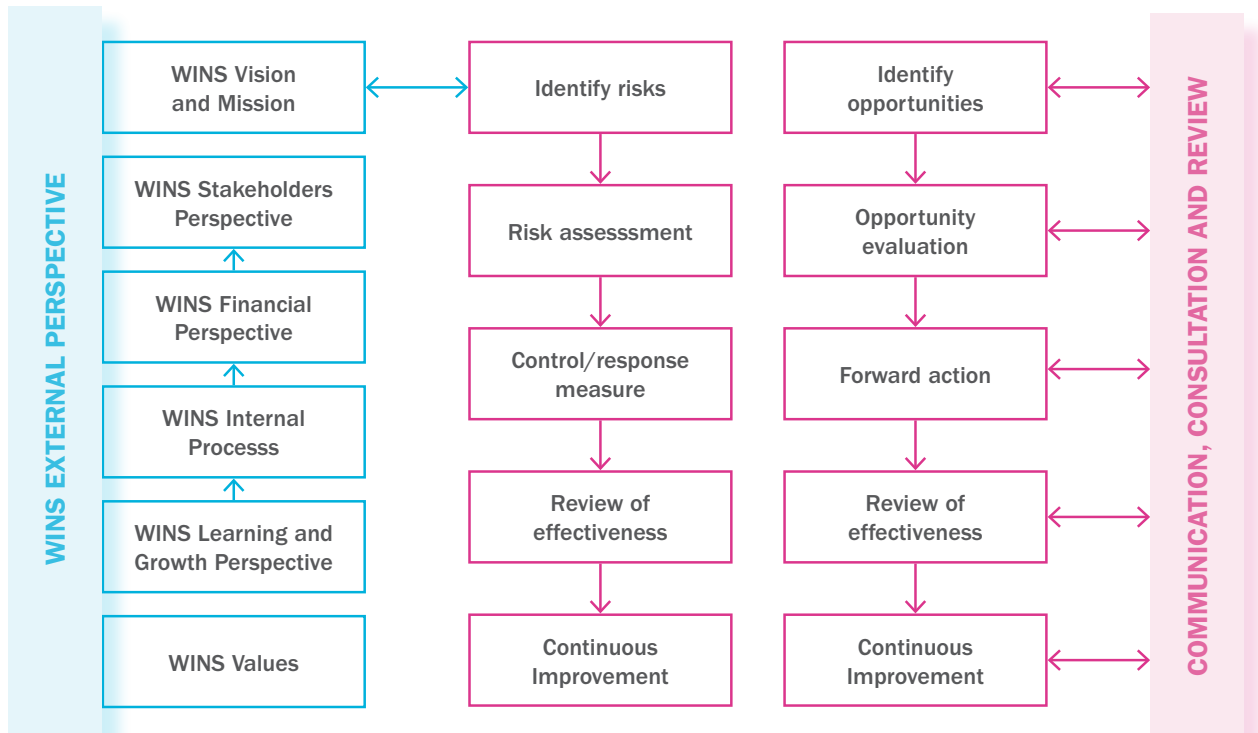


SUPPORT PROCESSES

QUALITY MANAGEMENT SYSTEM

Our Quality Management System (QMS) is the framework through which we align our policies, programmes and procedures to produce tangible and positive outcomes. It supports our stakeholders and guides us in working with them to achieve our mutual objectives. Our QMS helps us assess what we do and how we do it—from developing high quality learning materials and sharing operational experience to providing excellent customer and member services. It also helps us identify opportunities we might otherwise miss.

Our QMS guides us in the identification of meaningful performance indicators that track our progress. It also gives us a methodology for planning, implementing, evaluating and assessing in a cycle of a continual improvement. We will continue to pursue and improve this process in the coming years.



WINS was recertified in 2016 for ISO 9001:2015 and ISO 29990:2010, again demonstrating our commitment to quality, accountability, learning and continuous improvement.



WEBSITE AND COMMUNICATION

Our website is key to everything we do; consequently, it has periodically undergone some major and minor upgrades. In the last couple of years, it has become apparent that the website needs a major overhaul to improve its appearance and functionality, especially in regard to the management of the databases that support our programmes. Consequently,

in 2016 we hired an in-house website manager to design, implement and oversee the changes. Once we launch the new website in May 2017, we will continually assess the impact of the changes on our members' satisfaction. Our goal is to ensure a seamless user experience for WINS members and Academy alumni.

FINANCIAL PERFORMANCE

Our financial systems are based on a system of zero-based budgeting and strict time allocation for every staff member so that we control our time and associated costs to a high standard. In 2016 we made good progress on increasing our provisions for potential liabilities and for corporate

development opportunities. Our 2016 accounts were intensively and independently audited by Deloitte in February 2017 and found to be fully satisfactory. Our financial position at the end of 2016 and the allocation of funding to different activities are shown below:

BALANCE OF FINANCIAL POSITIONS ON 31.12.2016

WINS Assets (A): €3,877,267

Restricted funding for programme deliverables €2,628,858

Unrestricted funding for corporate development €532,318

Outstanding liabilities and provisions €682,839

Total liabilities (L): €3,844,015

Operating reserves (A-L): €33,252

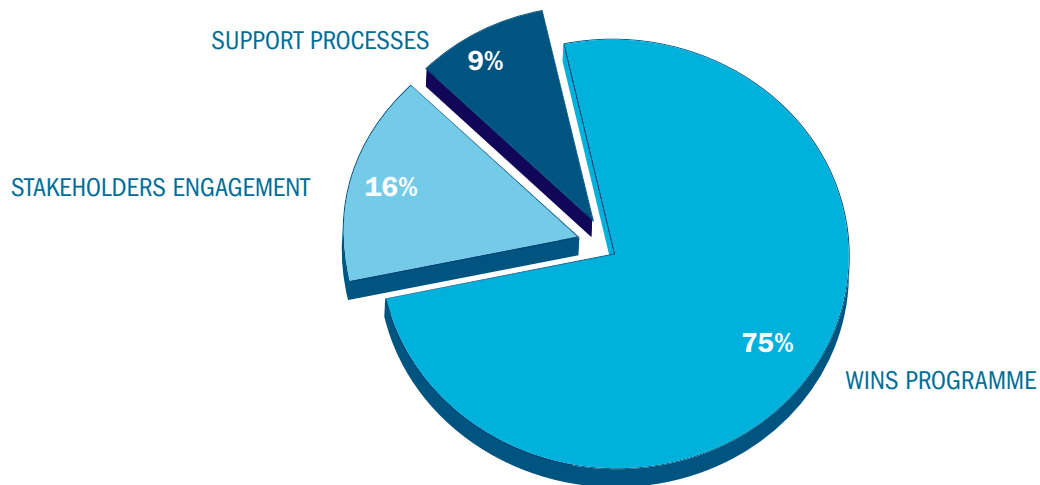


OVERVIEW OF INCOME AND EXPENSES IN 2016

Income from delivered programme	€3,171,843
Corporate donations and other income	€166,785
<hr/>	
WINS Income:	€3,338,628
<hr/>	
WINS Expenses:	€2,798,323

ACTIVITY RELATED EXPENDITURE DISTRIBUTION

Over 90% of our annual operational budget in 2016 was directly allocated to Stakeholder Engagement and the WINS Programme; the balance was used for WINS Support Processes.



WINS TEAM

The WINS team comprises 13 full-time staff; in 2016 we appointed Amanda Kratochvil as the Academy Project Assistant, Ingrid Kirsten as the new Stakeholder Engagement Manager, and Ronald de Block as the Website Manager. All have extensive experience and make a strong contribution to our objectives for providing excellent Academy services, on-going stakeholder engagement and an improved experience from our on-line services. We were delighted that Raquel Delgado re-joined the WINS team as a Project Manager after a period on maternity leave.

Brunelle Battistella left WINS in the autumn of 2016 to take up a post at the IAEA and we wish to thank her for her outstanding achievements and contribution to the WINS Academy.

STAFF REVIEW AND PROFESSIONAL DEVELOPMENT

WINS staff have clear accountabilities and responsibilities. They undergo performance reviews every six months, during which their contributions are acknowledged in writing and areas for improvement are identified. On average, WINS allocates around 5% of annual salary costs for professional development programmes open to all staff members. We also organise in-house training events and team building activities to help staff develop a common vision of WINS' priorities and programmes. All staff are empowered and encouraged to make important contributions to WINS programmes.



PIERRE LEGOUX
Head of Programmes



ANUBHAV SHRIVASTAVA
Information Technology Specialist



VESNA GRADT
Head of Finance
and Development



AMANDA KRATOCHVIL
WINS Academy
Project Manager



ALEKSANDRA ZILIC
Financial Project Controller



BETTINA LOCK
Office Manager



DANIEL JOHNSON
Head of the WINS Academy



JADALLAH HAMMAL
Programme Manager



RAQUEL DELGADO
Project Manager



CLARICE DANKERS
Learning Technologist



RONALD DE BLOCK
Website Manager



INGRID KIRSTEN
Stakeholder Liaison Manager



DR. ROGER HOWSLEY
Executive Director



2017 TARGETS

- ✓ Make demonstrable progress against the 2020 strategic outcomes
- ✓ Define and achieve all programmatic goals
- ✓ Encourage at least four additional countries to sign INFCIRC/901
- ✓ Develop a methodology for Peer Review in cooperation with WANO that can assess the effectiveness of corporate oversight arrangements for security
- ✓ Reach 500 Certified Nuclear Security Professionals (CNSPs) through the WINS Academy by the end of 2017
- ✓ Develop the blended-learning programme and Academy training courses
- ✓ Create and publish a WINS Academy Elective on Cyber Security
- ✓ Revise and combine the WINS Academy Electives for Nuclear Security Executive Management and Governance
- ✓ Publish an ISO29990 Certification Handbook to assist Nuclear Security Support Centres (NSSCs)
- ✓ Encourage two NSSCs to commit to achieving ISO29990 certification
- ✓ Lead a comparative review of nuclear and aviation security management, regulation, and international oversight
- ✓ Launch the new WINS website and database management systems

WINS FUNDING ORGANISATIONS



Networks and Communication

Throughout this year's annual report you may have noticed the molecular-shaped structures in the background and wondered what they represent.

There are two answers.

Firstly, they represent the building of networks and structures between organisations and individuals that have a common interest in coming together and working for the same objectives and outcomes. We used a design very similar to this in our early WINS publications to visualise the importance of collaborative working.

Secondly, recent research has shown the incredible complexity and beauty of how different animals and plants

use specific molecules to communicate with each other and signal their willingness to cooperate. Whole forests now seem to be interconnected by these molecular communication systems and some tree species work in symbiotic partnerships with different species to support and help one another.

The more we research, the more we humans discover the collaborative mechanisms in the wider natural world around us.

We should all reflect on how we can work together more effectively to prevent, rather than respond, to nuclear terrorism. It is of vital importance for our species and those that share the planet with us.



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NUCLEAR SECURITY



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OUR VISION

All nuclear and other radiological materials and facilities are effectively secured by demonstrably competent professionals applying best practice to achieve operational excellence

OUR MISSION

To be the leader in knowledge exchange, professional development and certification for nuclear security management