

United Nations
Educational, Scientific and
Cultural Organization

UNESCO
INSTITUTE
for
STATISTICS

Medium-Term Strategy

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Our vision

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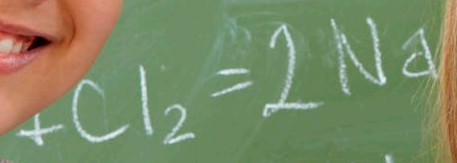
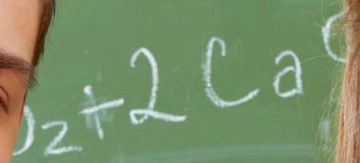
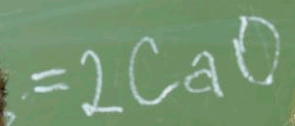
The opportunities and living conditions of children and adults are improved through effective policy interventions informed by the use of high-quality statistics

by:

- collecting, processing, verifying, analysing and disseminating high-quality, relevant, cross-nationally comparable data about education, science, technology and innovation, culture, and communication;
- developing and maintaining appropriate methodologies and standards, which reflect the needs and challenges that apply to countries at all stages of development;
- reinforcing the capacities of national statistical offices and line ministries to produce and use high-quality statistics;
- applying the highest professional standards, which entail transparency, accountability and the most efficient use of resources; and
- responding to the statistical needs of stakeholders while providing free access to UIS data to different types of users, such as governments, international and non-governmental organizations, foundations, researchers, journalists and the wider public;

so that:

- policy, research and decisionmaking are informed by sound statistical information;
- countries can benchmark their progress towards national and international goals and learn from the experience of others; and
- Member States and their citizens benefit from a public good of international statistics that they trust and use.



From vision to action

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UIS strategy and priorities

This vision statement reflects the transformation of the UNESCO Institute for Statistics (UIS) since 2001, when we first opened our doors in Montreal with a handful of staff. Today, the UIS is the world's most trusted and comprehensive source for education statistics and has introduced a range of new data collections and international standards in the fields of science, culture, and communication. With a network of statistical advisors based around the world, the UIS leverages its resources to improve the quality and use of data at national and international levels.

We seek to consolidate these gains and offer new services to a wide range of data users, including governments, United Nations (UN) agencies, non-governmental organizations, researchers, journalists and the wider public. These services can take different forms but will contribute to our central goal of providing “data to make a difference”.

This strategy is based on consultations with a broad range of actors and has been approved by the Institute's Governing Board. By identifying a clear set of priorities, the strategy serves as a blueprint to align the information needs of Member States and the international community with the activities and resources of the Institute. In particular, this strategy takes a pragmatic approach by clearly linking expected results to two sets of projected income levels: the equivalent of about US\$12 million in 2014, which is the minimum amount required

Box 1. Looking ahead while leaving no one behind in the data revolution

Today, we are experiencing an unprecedented expansion in the volume of data, with new flows and sources of information circulating in increasingly digitised societies. The UN High-level Panel on Post-2015 Development Challenges has highlighted the role of data and called for a data revolution, whereby new technologies and approaches are used to leverage progress toward such critical development issues as extreme poverty. While the specific requirements and objectives of this data revolution will evolve, the UIS has a clear role to play, especially in the field of education.

In particular, the demand for education data from traditional sources — such as administrative data collections, household surveys, population censuses and learning assessments — will continue to rise but will have little effect if they are not supported and used towards more effective policymaking. The UIS is uniquely situated to critically assess these data sources (using data quality frameworks), while working with national authorities and international partners to use innovative and effective methods to collect more and better data from schools, households and other sources. In addition, the UIS will work with these partners in seeking to further disaggregate the data by gender, geography, income, disability and other categories in order to deliver on the promise of a data revolution that “leaves no one behind”. For example, there is growing interest in combining geographical information, population data and school-level data to better address a range of issues, such as equity in educational opportunities, efficiency in classrooms and school-based approaches to deliver nutrition and health programmes to all children (see *Priority 1*).

Given the rapid rate of technological change, the official statistical community needs to better understand the issues and develop new methods, tools and ideas to make effective use of these opportunities. The UIS will enlist a group of technical advisors to not only keep abreast of these developments but to expand the reach and impact of the Institute’s global databases, which constitute a key public good (see *Priority 2*). In addition, the Institute will help countries better understand

and seize these new opportunities to improve the functioning of national data systems through quality assessment, integration and application of best practices in data collection, dissemination and use (see *Priority 3*).

At the same time, the UIS will continue to improve the fundamentals of basic data collection and the linkages across different types of traditional data (for example, student participation, learning assessment results and household information). In the short run, developing countries may need *ad hoc* approaches, such as school or household-based surveys, to provide information while reinforcing and building up their statistical infrastructure — but the most cost-effective and sustainable approach is through developing well-functioning administrative systems. The UIS will ensure that the needs of the education sector are reflected in national efforts to improve data quality through National Statistical Development Strategies (NSDS). It will also help to diagnose the functioning of statistical systems to identify where interventions are needed, while continuing to foster a culture of data use for policymaking.

to deliver core services, and a budget of about US\$15 million, based on previous experience in raising extra-budgetary resources.

The strategy also positions the UIS to respond to emerging priorities and information needs, especially with regards to the post-2015 international development agenda. It is clear that the demand for accurate and policy-relevant data will continue to rise as policymakers

at national and international levels require statistical information to:

- effectively formulate and target policy interventions;
- identify bottlenecks;
- monitor and evaluate results; and
- make optimal use of financial and human resources.



Main lines of action (MLAs)

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The strength of a statistical institute rests on the trust and confidence of users in the quality of its data. For the UIS, the improvement of the quality and use of its data is a core priority that cuts across all activities, which are structured according to four main lines of action. Within each of these areas, the UIS will seek to:

- develop appropriate methodologies and standards;
- reinforce national capacities in the production and use of data; and
- strengthen and promote the analysis and use of data for evidence-based policymaking.

The UIS will also continue to collaborate closely with data producers and users to ensure that its work programme responds to their needs in terms of statistical information and capacity-building. Emphasis will also be given to establishing networks of countries and experts for each of the statistical domains within UNESCO's fields of competence in order to improve the accuracy, cross-national comparability and policy-relevance of resulting data and indicators.

MLA 1: Development of education indicators and promotion of data use and analysis

In order to ensure a comprehensive and informative picture of the state of education (from early childhood to adult education), the UIS focuses on improving data quality at both national and international levels — particularly in terms of the relevance, comparability, coverage, reliability and timeliness of cross-national indicators, while maintaining its global database which represents an important public good for all stakeholders.

The UIS is striving to address the rising demand for data needed to monitor progress towards international development goals, while formulating and monitoring baselines for the post-2015 agenda. To benchmark national policies and help inform planning and policy formulation, it is essential to develop a broader measurement agenda to support more systematic capacity development in Member States, while improving data collection instruments and methodologies. The UIS is well-positioned to ensure that relevant and ‘fit for purpose’ methodologies and standards are developed, updated, communicated and implemented with all education stakeholders.

Priorities in the main line of action include:

- responding to new regional and global data needs through the use of flexible and targeted data collections;
- assisting countries to map their education systems according to the 2011 International Standard Classification of Education;
- developing new indicators and methodologies;
- working with countries to improve institutional capacities in the collection and use of education statistics; and
- producing analytical reports and data products.

MLA 2: Development of international statistics on education outcomes

Despite major advances in enrolling millions of children into school worldwide, gains have been uneven and learning levels remain unacceptably low. Poor-quality education is jeopardising the future of millions of children and youth in countries at all levels of income.

The Learning Metrics Task Force, convened by the UIS and the Center for Universal Education of the Brookings Institution, sets forth an ambitious agenda to leverage assessments in order to improve learning opportunities and outcomes for all children and youth. The UIS will

take a leading technical role in addressing the follow-up to the Task Force's recommendations (see *Priority 2*), notably by:

- documenting existing large-scale assessment systems across the world and identifying good practices in measurement;
- defining and measuring learning broadly and across multiple domains and educational stages;
- incorporating selected global measures of learning within existing assessment efforts; and
- advocating for accessible, transparent systems for the measurement of learning.

MLA 3: Development of international statistics on science, technology and innovation; culture; communication and information

SCIENCE, TECHNOLOGY AND INNOVATION STATISTICS

Science, technology and innovation (STI) are universally recognised as key factors in economic growth and social welfare. Member States are therefore seeking to stimulate activity in this area. But in order to formulate, implement and monitor effective policies, governments require timely and cross-nationally comparable STI indicators.

The UIS is the lead UN agency responsible for collecting and disseminating STI statistics for countries at all stages of development. The UIS will continue to conduct global surveys in this area, while providing the methodological resources and training programmes specifically designed to reflect the contexts and priorities of developing countries in order to help them produce and use high-quality data (see *Priority 1*).

CULTURE STATISTICS

There is a growing demand in the international community for data to assess the role of culture in development. As the lead UN agency responsible for cultural statistics, the UIS is seeking to expand the scope of cross-nationally comparable data in this area, while developing methodological guidelines and handbooks to support their production (see *Priority 1*).

In particular, the UIS will develop and implement a new global survey on cultural employment statistics, while continuing to produce and disseminate cross-nationally comparable data on feature films, which represent a major cultural industry and form of expression. The UIS will also continue to train national statistical offices and line ministries on the implementation of the 2009 *UNESCO Framework for Cultural Statistics* in order to foster the development of national and international surveys in the field of culture.

COMMUNICATION AND INFORMATION STATISTICS

In the field of communication and information (CI), the UIS will focus its data collection and methodological work in three areas: the use of information and communication technology (ICT) in education; print, broadcast and digital media; as well as media and information literacy.

Despite the rising demand for data in these areas, it is extremely difficult to mobilise financial resources to develop the statistical frameworks and survey instruments needed to measure them. Therefore, the UIS will prioritise efforts to produce cross-nationally comparable indicators on ICT in education (*see Priority 1*). Methodological work will continue in the other areas in close collaboration with UNESCO's CI sector and specialised partners, but new data collection activities will depend on the establishment of additional and stable funding.

MLA 4: Reinforcement of cross-cutting statistical activities

The improvement of data quality has been a key priority since the founding of the Institute and real progress has been made. However, new challenges emerge with the constant evolution of political contexts, policy priorities and statistical needs.

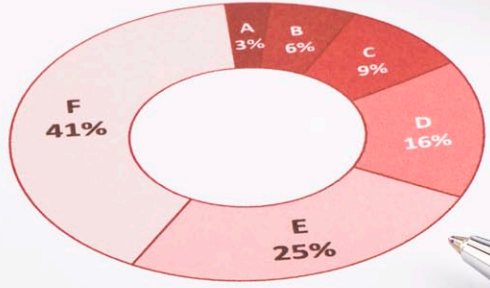
In response, the UIS has developed a range of initiatives designed to improve different facets of data quality. In particular, the UIS will continue to invest in training and capacity development among national statisticians and regional partners with the support of its network of field staff (*see Priority 3*).

In addition, the UIS will continue to update its internal frameworks, procedures and instruments designed to monitor and improve the quality of its data, as well as the efficiency by which these statistics are produced and disseminated. In particular, special attention will be given to produce new electronic products designed to improve the visibility and use of UIS data, while offering new dissemination services through the online Data Centre and expanding the scope of metadata available (*see Priority 2*).



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Priorities for 2014-2021

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Within the framework of the UIS main lines of action, the Institute has identified three key priorities for the next medium-term period:

1. Statistics for human development;
2. Strengthening the public good of statistics; and
3. Improving data quality.

Priority 1: Statistics for human development

The UIS is the only statistical organization to produce cross-nationally comparable data for countries at all stages of development in the fields of education, science and technology, culture, and communication. The UIS seeks to improve the use of and access to inter-sectoral indicators from a wide range of sources on human development issues.

This focus on “statistics for human development” is part of the Institute’s strategy to respond to emerging statistical information demands, especially in relation to the post-2015 global development agenda. The UIS is uniquely situated to provide the evidence and data required to rethink the role of education, scientific innovation and culture in relation to poverty-reduction, sustainable economic development, the improvement of health outcomes and other development challenges. The UIS will therefore continue to produce the data required to monitor and assess progress towards these

broader priorities, while closely monitoring more specific targets in its fields of competence.

A. EQUITY AND GENDER

The post-2015 development agenda focuses specifically on the need to broadly reduce and eliminate inequalities in societies — from socio-economic conditions to the provision of basic services, such as health care and education. Statistical agencies, such as the UIS, must not only seek to monitor these inequalities but evaluate their impact in order to provide the statistical information required to design and implement effective policies and interventions.

In the field of education, there is an urgent need to identify and evaluate the extent to which key characteristics — such as gender, household income, ethnic identity, geographic location and others — limit the opportunities of an individual or specific community to access and complete compulsory education of good quality in order to attain essential skills for work and life. In response, the UIS will seek to develop a new body of evidence to help monitor the impact of inequalities in education by:

- **Conceptualising, testing and validating new measurement frameworks.** This will entail considerable consultation with stakeholders in order to build consensus on a clear set of indicators that

can be regularly produced and used for monitoring purposes at national and global levels. The UIS is uniquely situated for this work given its extensive networks and experience in standard-setting (see *Priority 3*). In addition, the UIS has the expertise required to adapt methodological approaches made in other fields to that of education. For example, the approaches used to evaluate income distribution could serve as a basis to evaluate the distribution of learning opportunities and outcomes. To ensure the feasibility of these new frameworks and measures, the UIS will ensure that they are validated by national and international partners.

- **Expanding the scope of available data.** The UIS will focus on identifying and mapping new data sources while leveraging existing sources. For example, surveys on the labour force or health outcomes can offer very relevant information for education policymaking. Yet in many countries, education ministries do not have the training required to effectively integrate these data in their statistical information systems and planning processes. The UIS will reinforce national statistical capacities to identify, map and use these sources for effective planning and policymaking (see *Priority 3*). While expanding the use of cross-sectoral surveys, the UIS will also seek to improve the design of school surveys and learning assessments. In many cases, the quality and use of the resulting data can be

Box 2. What does an education really cost?

Across sub-Saharan Africa, households provide a considerable share of education funding, directly contributing about 30% of the resources devoted to their children's primary education. Moreover, it is estimated that families and communities account for about 44% and 49% of the costs associated with lower and upper secondary education, respectively. In many cases, data on private sources of funding are collected through household surveys, but the information is rarely integrated into education planning and policymaking processes. So when evaluating the impact of initiatives to reduce or abolish school fees, for example, many governments are not always aware of the actual costs of sending a child to school.

Given the major implications in terms of equity, the UIS will continue to broaden the scope and coverage of all sources of education funding (public, private and international). By explicitly focusing on the different funding sources, the UIS will provide education decisionmakers information which is similar to that currently available to health, tourism and other sectors.

Accurate and timely finance data are essential for larger initiatives designed to provide quality education to all by monitoring the commitments and resources of a broad range of actors, including governments, UN agencies and NGOs. In short, education finance is not simply a technical consideration but a central element in efforts to improve the governance by which governments and international agencies seek to reduce inequalities and improve the quality of educational provision. The UIS is therefore seeking to expand its capacity-building efforts to help countries implement international standards and sustainably produce and use data on education finance, while also working with international partners to integrate these data into larger planning and monitoring systems (see *Priority 3*).

improved dramatically by modifying selected survey items or introducing a limited number of new items.

- **Promoting the use of new measures of equity.** The new measures will allow us to better identify the specific characteristics of children and youth who are marginalised in terms of educational opportunities. It is therefore essential to promote the use of these data for policymaking and advocacy purposes in order to help reduce and eliminate such inequalities.

The UIS will continue to focus on gender-related inequalities as a priority. Despite progress, girls account for the majority of out-of-school children and a number of countries face persistent gender inequalities in access to education and learning. The status of girls and other inequalities in relation to education will continue to represent an important focus of the post-2015 agenda.

Overall, it is important to address these inequalities and inadequacies in education given the wider implications in terms of health outcomes and economic opportunities at the individual and societal levels. In order to measure the various aspects of inequality, indices have been established that weigh the economic, political and social dimensions of gender differences and integrate them into a single value that can be ranked. Key examples include the World Economic Forum's index and ranking on the global gender gap based on quantitative and qualitative data in five

key areas, including UIS education data, as well as the Human Development Index, which draws on UIS education and STI data.

The UIS will strive to produce sex-disaggregated data and gender parity indices in all of its mandated areas. In addition, the UIS will seek to produce gender-related indicators — from access to girls' toilets in African schools to women's role in scientific innovation in countries at all stages of development.

The UIS will also continue to consult with different partners, such as donors, international agencies, governments, regional organizations and non-governmental organizations (NGOs), to incorporate these data in the development and monitoring frameworks of a wide range of interventions, such as school-based immunization programmes in developing countries through the GAVI Alliance and the World Health Organization.



Strategic directions and outcomes in this area include:

(i) Produce a wide range of indicators disaggregated by sex.

OUTPUTS:

- All relevant education, STI, culture, and communication indicators disaggregated by sex in the UIS Data Centre and publications.
- Maintain and disseminate gender parity indices, support improvements in the interpretation of these indicators and consider new types of measures.
- Technical support provided to partners, such as UN Girls' Education Initiative (UNGEI) and broader constituencies, in relation to education exclusion and inequalities.
- Produce statistical reports and other products presenting main findings at global and regional levels.

(ii) Generate and disseminate national and subnational profiles of children out of school.

OUTPUTS:

- Detailed statistical profiles on out-of-school children, disaggregated by age, sex, location, household wealth and other characteristics.

(iii) Assess sources of statistical information related to education and disseminate disaggregated data.

OUTPUTS:

- Inventory of available national administrative, household survey and other data on education.
- Produce disaggregated indicators by sex, location, household wealth and other markers of disadvantage as part of household survey-based data in the UIS Data Centre.
- Produce statistics on out-of-school children by exposure to education (e.g. left school, will attend, will never attend) and individual characteristics.
- Produce statistical reports and other products presenting main findings at global and regional levels.

Monitoring

- Partners have greater access to disaggregated indicators in the UIS Data Centre;
- Guide on sex-disaggregated indicators is implemented by national statistical offices;
- Methodologies and standards are integrated into national surveys;

\$12 million / year

(iv) Improve coverage of data on education spending and its uses.

OUTPUTS:

- Improved coverage of education expenditure data.
- More systematic measurement of the financial contribution of families and students at the global level.
- Strengthened institutional capacity in countries to collect and use finance data.

(v) Develop new indicators and improve existing methodologies.

OUTPUTS:

- An updated guide on sex-disaggregated indicators for data producers.
- New indicators to monitor emerging goals for primary and lower secondary education.
- Improved accuracy in how pupils are counted, from the classroom to system level.

\$15 million / year

(vi) Improve measurement of individual level characteristics on participation and completion of education using household survey data.

OUTPUTS:

- Comparison of estimates of school participation of children of primary and lower secondary school age from administrative and survey data.
- Comparison of household survey questionnaires, assessment and promotion of best practices in education module design.

- New indicators are developed and reported;
- Resulting indicators are used in the development of national education plans; and
- Knowledge and experience shared widely.

B. EDUCATION QUALITY IN BASIC EDUCATION

The benefits of education to national development, individual prosperity, health and social stability are well known, but these benefits are significantly greater when students are actually learning. Despite commitments and progress in improving access to education at the global level, low levels of learning persist in many countries. It has been estimated that at least 250 million primary school-age children around the world are not able to read, write or count well, even among those who have spent at least four years in school (EFA Global Monitoring Report, 2012).

The quality of education is a priority for all countries, yet it is extremely difficult to define and measure, especially at the global level. In consultation with partners, the UIS will seek to develop new frameworks and measures of education quality by taking an incremental process to forging consensus within the international education community. In the short term, the UIS will focus more explicitly on school and classroom conditions that help to shape a child's learning experience.

Teachers play a critical role in the functioning of education systems and ensuring good learning outcomes. The UIS will broaden the scope of indicators on their qualifications and training, working conditions, access to pedagogical materials, and the use of information and communication technology (ICT). UIS projections on teacher demand and supply will help

countries to assess whether there are enough teachers in classrooms to achieve universal primary and lower secondary education. Given the critical role of teachers in the delivery of quality education, the UIS will also develop more detailed statistical information concerning the amounts of public resources devoted to teaching workforces. A new taxonomy of teacher qualifications and training will enable the Institute to improve the accuracy and cross-national comparability of its indicators.

In addition, the UIS will produce new global indicators on the structure and delivery of education provision as well as regionally-specific indicators concerning classroom conditions. Priority will be given to sub-Saharan Africa, which faces the greatest challenges (*see Priority 2*). The UIS will continue to produce and promote the use of its indicators on classroom conditions — from the extent to which pupils and teachers have access to such basic amenities as electricity, drinking water and toilets to the availability of learning and teaching materials.

It is recognised that these types of indicators are not direct measures of education quality. Nevertheless, this information is essential for managing education systems and improving the learning outcomes of students, especially in developing countries, where needs are greatest and data are sparse. It is difficult to imagine how any effective education plan or reform can be designed or implemented without accurate information concerning, for example, the actual supply of trained

teachers, the percentage of resources devoted to their wages or the availability of textbooks.

These types of indicators also provide the contextual information needed to make the shift at the international and national levels from a narrow focus on education access to a broader concern for learning outcomes. This shift highlights the need for a new generation of indicators to reflect the full extent of the global learning crisis. The large-scale measurement of learning outcomes is limited in many developing countries and hence difficult to assess at the international level. Thus, a global data gap on learning outcomes is holding back progress on education quality. There is a critical need for robust data to understand the full scale of the learning crisis and target policy to address areas of need and track progress at global and national levels.

The Learning Metrics Task Force sets forth an ambitious agenda to leverage assessments in order to improve learning opportunities and outcomes for all children and youth. While the actions needed to improve measurement and learning depend on the contextual factors in each country, all countries are struggling with measurement in some way. Assessments alone will not improve the quality of instruction or learning environments, but reliable data on student achievement can help policymakers and educators develop strategies for improving learning while taking into consideration contextual factors.

The UIS will build on the recommendations of the Learning Metrics Task Force by proposing a comprehensive set of global learning competencies and measures at the early childhood, primary and post-primary levels. In collaboration with partners, the UIS will:

- develop and test a set of “Learning for All” indicators that combine measures of access (completion) and learning (reading proficiency) at the end of primary school;
- improve measures of timely entry, progression and completion of schooling, as well as population-based indicators, to capture children who do not enter and progress on time; and
- contribute to efforts to measure foundational reading skills by Grade 3 and proficiency by the end of primary school, as well as basic skills by the end of primary and proficiency by lower secondary school.

In addition, the UIS will also provide Member States and the international community with the statistical and technical information to make informed decisions about the implementation and use of national and regional assessments. Accurate and comprehensive information in this area is critical, especially given the significant investments required to conduct assessments. Yet currently, there is no central repository or platform



whereby governments and agencies can access data and related information on the technical and methodological attributes of the assessments. Through its Observatory of Learning Outcomes, the UIS will bridge this gap by:

- developing an international catalogue of student achievement assessments and examinations in order to create a global repository of information;
- generating a global database of comparable data on student achievement (focusing on literacy and numeracy skills at the end of the primary cycle) by promoting collaboration among existing regional assessment initiatives; and
- serving as a clearinghouse in the development and systematisation of oral assessments.

The UIS has established cooperation mechanisms with regional assessment organizations to compile country-level information (e.g. the Southern and Eastern Africa Consortium for Monitoring Educational Quality; *Programme d'Analyse des Systèmes Éducatifs des États et Gouvernements Membres de la CONFEMEN* and the *Laboratorio Latinoamericano de Evaluación de la Calidad de la Educación*). This data compilation will continue to be done in agreement with countries and will be based on instruments developed by the UIS. The resulting information will be validated by Member States before it is transferred to the international dataset and made publicly available. This approach is designed to ensure consistency without creating unsustainable reporting burdens on national authorities. It will also serve to strengthen existing assessments due to the increased exchanges on methodological issues among regional consortia and countries.

Strategic directions and outcomes in this area include:

(i) Develop new comparable measures related to teachers and teaching.

OUTPUTS:

- Expanded global database on teachers that includes comparable data on teacher training and qualifications, teachers' characteristics and working conditions.
- Taxonomy of teacher training programmes—a framework to describe programmes and enable cross-nationally comparable data and indicators.
- Improved estimates of primary and secondary teacher supply and demand.

(ii) Produce a global database of comparable data on national assessments and available learning outcomes in partnership with different assessment institutions.

OUTPUTS:

- Database of characteristics of national assessment systems and best practices in oral assessment.
- Cross-nationally comparable indicators of learning outcomes (focusing on reading and numeracy skills) by the end of primary school.

(iii) Produce a new set of indicators related to progression and completion of education cycles and improve existing measures.

- New cohort-based approaches for school progression and completion and learning outcomes for global monitoring.
- More and better quality statistical information on school participation by age.

Monitoring

- The public has greater access to existing student assessment approaches, designs and indicators from around the world;
- National policymakers are guided in decisions about undertaking new assessments, which entail considerable financial and human resources;

\$12 million / year

(iv) Build a repository of technical documentation and guidelines to help Member States make informed decisions on participation in international studies and implement and/or adjust their own national assessment systems.

OUTPUTS:

- Catalogue of large-scale assessments that countries are using to understand the learning levels of their school children. This information will be compiled using national and international sources and will include selected attributes of measurement approaches.

(v) Develop new indicators related to educational attainment while improving the coverage of the UIS database.

OUTPUTS:

- A proxy measure for years of schooling based on a transformation of educational attainment data by ISCED level and educational programme, where available.

(vi) Produce new indicators on school and classroom conditions to better reflect education quality.

OUTPUTS:

- Greater coverage of comparable data on classroom conditions and school organization.
- Review of how classroom conditions are measured in national large-scale assessments.
- Frameworks, guidelines and best practices for measuring classroom conditions and practices.
- New indicators on education provision which use schools as the unit of analysis.
- Design data collection approaches that capture measures of education quality and classroom conditions at the school level.

\$15 million / year

(vii) Prepare a new body of cross-nationally comparable statistical information on reading and numeracy skills through expansion of the Literacy Assessment and Monitoring Programme.

OUTPUTS:

- Comparable statistics on the proportion of adults at different levels of achievement in reading and numeracy available for a wider number of countries.

- Indicators on classroom and school conditions are collected and reported globally;
- Learning indicators are collected and reported globally; and
- Resulting indicators are used in the development of national education plans.

C. ACCESS TO SECONDARY EDUCATION, SKILLS DEVELOPMENT AND HIGHER EDUCATION

There is growing demand for secondary education and youth learning opportunities, especially as countries achieve the goal of universal primary education (UPE). In particular, it is important to focus on increasing transition rates from primary to lower secondary education without compromising the quality of provision. This will require evidence-based strategies and interventions designed to broaden access in striving to provide free, compulsory, quality secondary education to all children.

While strengthening secondary education, it is critical to address gender issues, such as the participation of girls and the performance of boys. At the same time, the expansion of secondary education must not take place at the expense of primary education, or vice versa. Countries that have achieved UPE must maintain the commitment to primary education while moving towards universal secondary education.

In order for countries to compete effectively in the global economy and to specialise in areas of comparative advantage, it is increasingly necessary to build a workforce educated to secondary and higher education levels. Cross-national studies have shown that the positive impact of trade on economic growth is larger if it is accompanied by higher levels of educational attainment. Moreover, secondary and tertiary education are crucial to achieve all of the major development goals. For example, in relation to extreme poverty and hunger, universities train professionals in

all sectors linked to food security — from agriculture and aquaculture to biotechnologies and cooperatives. They also play an essential role in understanding the causes of poverty and advising governments and other stakeholders on effective ways to reduce it.

Faced with rising rates of youth unemployment, developing countries are seeking to better target skills development activities. However, it is difficult to monitor and improve policymaking in this area without accurate and reliable statistical information. Currently, there is no international consensus on a framework to measure and monitor skills. Part of the challenge is to develop a framework and compile data that reflect the full range of skills development activities provided in formal and informal settings. These data must also reflect the demand for skills in the labour market and reflect policies and programmes intended to match this demand with supply.

To bridge this gap, the UIS has been given the mandate to develop a comprehensive statistical framework to monitor policy-relevant skills development activities for employment, as expressed in the Shanghai Consensus (adopted in May 2012). This work will entail extensive collaboration with international partners, regional organizations and bilateral development agencies. Given the complexity involved in the design of a new statistical framework, the UIS is proposing to take a gradual approach by initiating work at the national level which will then feed into work at regional and international levels. In addition, the UIS will explore measures which characterise the links between education and the labour market.

Strategic directions and outcomes in this area include:

\$12 million / year

(i) Develop the statistical frameworks needed to better capture issues concerning youth and skills.

OUTPUTS:

- New indicators on post-secondary participation, progression and completion.
- Disaggregated data on youth in and out of secondary school.
- Indicators on graduates, field of education and student mobility in tertiary education.
- Country profiles on secondary and tertiary education participation.

(ii) Consult broadly with data users to better understand data needs.

OUTPUTS:

- Development of the conceptual foundations for an international framework to produce cross-nationally comparable data on technical and vocational education and training (TVET).
- Development of regional frameworks based on national models.
- Development of national statistical frameworks for a number of developing countries to enable countries to sustainably monitor their skills development programmes.

\$15 million / year

(iii) Assessment of the the feasibility of linking graduation data with income and employment data through the use of new labour force surveys.

OUTPUTS:

- New measures reflecting the employability of graduates of secondary and higher education.

- Monitoring**
- Partners have greater access to new indicators in the UIS Data Centre;
 - Methodologies and standards are integrated into national surveys;
 - New indicators are produced and disseminated; and
 - Resulting indicators are used to develop national education plans and to formulate and assess education policies.

D. SCIENCE, TECHNOLOGY AND INNOVATION (STI) STATISTICS

STI is a key factor in economic growth and the alleviation of poverty. In particular, innovation lies at the heart of productivity, growth and job creation. Evidence suggests that countries which generate innovation grow faster than those that do not.

In developing countries, innovation data can be used to understand more precisely the functioning of the business sector by assessing key elements related to technology, design and training, as well as linkages between different actors in the economy. In short, the data can be used to identify factors that promote or hamper innovation.

Over the last few years, there has been a considerable increase in the number of innovation surveys undertaken around the world. However, these data are generally collected at the national level and are not necessarily comparable across countries. The UIS is therefore seeking to build a global database of innovation indicators that can be compared across countries at all stages of development. The data and accompanying metadata will serve as essential resources for policymakers seeking to develop effective policies at national and international levels.

To this end, the UIS will regularly conduct a global survey of innovation data that will complement its data

collection of research and experimental development (R&D) data. Both of these surveys will be conducted on a biennial basis, during alternate years, in order to reduce the burden on national respondents.

The collection of innovation data is new for many developing countries and a challenge for all. To assist governments in completing the UIS innovation survey, the Institute will provide capacity-building services and training workshops. The aim is to offer a training workshop in every developing region at least once every three to five years.

The UIS will also help countries develop their own surveys by creating and maintaining an inventory of innovation surveys undertaken around the world. National authorities can benefit from the experience of others by consulting the inventory, which will contain definitions, survey items and a wide range of metadata in different languages. In addition, the UIS will develop methodological guidelines and other resources to help countries respond to data requests. These methodological resources will include topics of specific relevance to developing countries, such as the collection of data on innovation in agriculture and the informal sector.

Strategic directions and outcomes in this area include:

\$12 million / year

(i) Expand the UIS STI database, notably through a global data collection specifically designed to produce more policy-relevant information on the role of the business sector in innovation, especially in developing countries.

OUTPUTS:

- Database of cross-nationally comparable STI statistics.
- Global inventory of all innovation surveys undertaken around the world.

(ii) Promote the use of STI indicators in reports and electronic products that link the data to development issues.

OUTPUTS:

- UNESCO eAtlas of R&D updated regularly.
- Analytical publications based on STI indicators.

(iii) Increase the timeliness of the STI database by carrying out the R&D data collection annually.

OUTPUTS:

- More timely database of cross-nationally comparable R&D statistics.

\$15 million / year

(iv) Develop new indicators and improve existing methodologies.

OUTPUTS:

- Methodological guide on how to conduct an innovation survey.
- Additional indicators to better capture specific issues related to innovation in the agricultural and informal sectors.

- Monitoring**
- Partners and the general public have greater access to a wider range of timely and disaggregated STI indicators in the UIS Data Centre;
 - Methodologies and standards are integrated into national surveys;
 - Knowledge and experience shared widely; and
 - New indicators produced and disseminated.

E. CULTURE AND DEVELOPMENT

Governments and citizens are moving beyond a purely economic measure of progress and recognizing the essential contribution of culture to development and the reduction of poverty.

Many countries, especially in the developing world, are trying to foster vibrant cultural industries as part of their efforts to reduce poverty and promote sustainable development. It is therefore essential to ensure that policymaking in this area is based on accurate data. At a minimum, there is a need to assess the size of the cultural labour force in the economy, while comparing employment rates in the culture sector to other sectors.

In response, the UIS is developing a global data collection on cultural employment based on the methodology of the *2009 UNESCO Framework for Cultural Statistics*. The survey will produce a core set of cross-nationally comparable data that can be used to assess the contribution of culture to economic and social development, as well as the conditions of those engaged in cultural activities.

The UIS will work closely with Member States to help them implement the global survey and develop their own national surveys in this area, while continuing to undertake its biennial survey of feature film statistics. This will entail the production of methodological handbooks and capacity-building activities, such as regional and national training workshops.

In addition, the UIS will collaborate with international partners to make available data and analysis pertaining to the international flows of cultural goods and services, based on secondary data sources.



Strategic directions and outcomes in this area include:

\$12 million / year

(i) Produce internationally comparable statistics and indicators on cultural employment that will be featured in a wide range of global reports.

OUTPUTS:

- Database of cross-nationally comparable indicators on cultural employment.
- Analytical publications on selected topics related to global cultural employment.

(ii) Reinforce the capacities of national authorities to implement the *2009 UNESCO Framework for Cultural Statistics* and develop appropriate statistical methodologies in order to expand the availability of high-quality data which can be used for national and international benchmarking and monitoring of culture policy.

OUTPUTS:

- Methodological handbooks on selected topics.
- Regional training workshops for national statisticians and line ministry officials.

(iii) Cross-nationally comparable statistics and indicators on the cinema sector featured in a wide range of global reports.

OUTPUTS:

- Timely and policy-relevant database of cross-nationally comparable data and indicators on the feature film sector.
- Analytical publications about selected global trends in feature film production.

\$15 million / year

(iv) Produce internationally comparable statistics and indicators on the trade of cultural goods and services.

OUTPUTS:

- Database of internationally comparable data and indicators on the trade of cultural goods and services.
- Analytical publications about selected global trends in cultural trade.

Monitoring

- Partners and the general public have greater access to updated, new and disaggregated indicators in the UIS Data Centre;
- Methodologies and standards are integrated into national surveys; and
- Knowledge and experience shared widely.



F. INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN EDUCATION

Countries at different stages of development are seeking to increase their returns to education by investing in the use of ICT in classroom settings. However, it is currently impossible to evaluate the impact of these investments globally due to the lack of cross-nationally comparable data. The UIS is seeking to fill this gap in information through its ICT survey, which addresses key policy questions concerning: the availability and use of computers in schools; the extent to which teachers are trained to use ICT in the classroom; and the ways in which these technologies affect the learning experience of students.

The UIS is seeking to leverage resources invested in this survey by introducing it on a regional basis before implementing it globally. This strategy is designed to ensure that:

- (i) the survey responds to a clear demand for data from regional platforms/partners representing national policymakers and statisticians; and
- (ii) national authorities establish mechanisms to collect a core set of data addressing their policy priorities and global monitoring needs (e.g. the World Summit on the Information Society).

The UIS will also continue to support UNESCO's CI sector on the development of indicators to measure media and information literacy and to monitor global trends in the media environment (print, broadcast and digital). Work in media-related areas will remain limited until sufficient and stable funding has been secured.

Strategic directions and outcomes in this area include:

\$12 million / year

\$15 million / year

(i) Expand the UIS database through regional data collections on ICT in education.

OUTPUTS:

- Database of cross-nationally comparable data on the use of ICT in education.
- Updated methodology to produce data and indicators in this field.

(ii) Support the UNESCO CI sector in developing media and information literacy indicators.

OUTPUTS:

- Country-level indicators for media and information literacy defined and published.

(iii) Expand the CI database through regional data collections on media statistics, until all regions are covered and a global data collection can be carried out.

OUTPUTS:

- Database of cross-nationally comparable media statistics.
- Revised methodology to collect media statistics.

Monitoring

- Partners and the general public have greater access to updated, new and disaggregated indicators in the UIS Data Centre;
- Methodologies and standards are integrated into national surveys;
- New indicators developed and disseminated; and
- Knowledge and experience shared widely.

Priority 2: Strengthening the public good of statistics

The UIS has been promoting and implementing the principle of open data years ahead of more recent initiatives by other organizations. UIS data are compiled according to international standards and provided free of charge to promote their use for evidence-based policymaking. They are considered to be a global public good that provides universal benefits to governments, civil society and citizens, and meet the following criteria:

- use of the data by one person or organization does not detract from their availability or use by another;
- data are freely available to everyone; no one is excluded from consuming the information; and
- data are disseminated globally in different formats and languages in order to promote their use.

The UIS is seeking to strengthen the value and use of its global datasets by:

- (i) producing more policy-relevant data; and
- (ii) improving their access and use among Member States, international organizations, academic organizations, the media and the wider public through the production of targeted reports and related electronic products.

A. PRODUCE MORE POLICY-RELEVANT INDICATORS

The UIS and the international statistical community at large are faced with a growing demand for more data and new types of indicators from three major stakeholders:

- (i) ministries need more relevant statistics for policymaking, especially in light of austerity measures implemented by many countries;
- (ii) international organizations require a broader range of indicators to better target new initiatives and to monitor progress; and
- (iii) donors are increasingly relying on data to evaluate the use of their resources dedicated to supporting national and regional development programmes.

No institution can respond effectively to this rising demand for data without addressing a major constraint: the response burden for national statisticians. National statistical authorities already invest considerable financial and human resources to respond to international surveys, such as those conducted by the UIS. This burden can be particularly heavy for developing countries with weak infrastructure and budget constraints.

In theory, the UIS could launch new data collections that are intended to respond to all of the data requests

received from its stakeholders. Yet in practice, these surveys would yield limited results if national statisticians are unable to respond. Therefore, the Institute has developed a new initiative to meet the most pressing demands for data without substantially increasing the burden on national statisticians.

The core questionnaire of the UIS annual education data collection has been reduced to allow for the creation of two types of modules designed for more flexible collection of data on specific topics of global or regional importance. More specifically, the regular data collection includes:

- a questionnaire designed to respond to the specific priorities and monitoring agenda for a particular region (such as schooling conditions in Africa or adult education in Latin America and the Caribbean); and
- a global questionnaire module that changes on a periodic basis in order to focus on a key theme or policy issue (such as the number of instructional hours in pre-primary, primary and secondary education).

The UIS is uniquely suited to collect data to meet the needs of regional entities given its experience, reputation and mandate as the UN depository for global education statistics. However, the UIS must leverage its position in order to ensure that there is no duplication of efforts, whereby different organizations request the same information from national statistical authorities.



Strategic directions and outcomes in this area include:

\$12 million / year

(i) Use of rotating global thematic modules, designed to collect specific policy-relevant information.

OUTPUTS:

- New indicators on emerging policy issues in education.
- Improved monitoring of national and international education development goals.
- Cross-nationally comparable data on major policies shaping education systems (e.g. working conditions of teachers, instructional hours, etc.).
- Electronic and print products featuring the new indicators and related analysis.

(ii) Support regional partners by developing new regional data collections on priority issues.

OUTPUTS:

- Regional sets of indicators specifically designed to address priority policy issues.
- Improved monitoring of regional and international education development goals.
- Greater use of cross-nationally comparable data for policymaking.
- More effective use of resources for education policymaking.
- One-stop data collection and delivery (i.e. reducing the risk of duplication of efforts by different organizations).
- Spill-over effects whereby regional organizations help leverage the work of the UIS with country partners, thus improving response rates and data quality.

Monitoring

- Partners and stakeholders have access to more policy-relevant indicators;
- Methodologies and standards are integrated into other international surveys and national statistics;
- Resulting indicators are used to guide policy and planning in order to make the most efficient use of resources; and
- Analysis of indicators undertaken at the regional level.

B. METADATA TO PROMOTE GREATER UNDERSTANDING AND ACCURATE USE OF UIS DATA

The UIS database is the authoritative source of cross-nationally comparable statistics that are used to inform policy decisions at national and international levels; benchmark and monitor progress towards development goals; and produce global, regional and national reports

and research. An extensive array of metadata is required to ensure the most appropriate use and interpretation of the data in the fields of education, STI, culture, and communication. This entails a regular review process to ensure accurate descriptions of the data, including source, definition, calculation method, quality and contextual information concerning fitness for use, etc.

Strategic directions and outcomes in this area include:

\$12 million / year

(i) Promote greater transparency of methodologies used to produce international indicators.

OUTPUTS:

- Rich and extensive set of metadata integrated within the UIS online database to inform users of the Data Centre about the data, where they come from, and how they may be used to inform decisionmaking.

Monitoring ■ National authorities and partners have greater access to metadata describing the data, calculation methods and their usage.

C. DEVELOP NEW STATISTICAL PRODUCTS DESIGNED TO ENGAGE WIDER AUDIENCES

The rising demand for data presents a tremendous opportunity for the Institute to improve the quality of its services to current users, while building on its reputation to engage with wider audiences interested in statistics and what they tell us about the world we live in. In particular, the UIS will prioritise the use of data visualization, in its diverse forms, to engage users by telling the “stories behind the data”. This will entail efforts to improve the quality and range of online products, such as country and regional profiles, interactive data tools, infographics and electronic publications, such as the UNESCO eAtlas series.

Initial feedback from users has been extremely positive, as demonstrated by traffic to the UIS website and surveys. However, investments in terms of technology and training will be required to increase the Institute’s capacity to design and produce these products. In addition, the UIS will also seek to build partnerships with public and private entities in order to develop more sophisticated products for targeted audiences.

To heighten the impact of these products, the UIS will work closely with UNESCO and other partners to disseminate them via websites and social media. This partnership approach allows the UIS to reach a large and diverse audience in a cost-efficient manner. Yet it is important to note that this digital environment is

constantly evolving and will undoubtedly offer new opportunities for the UIS.

While reaching out to new audiences, the UIS will also reinforce services offered to its core constituency of data users, primarily consisting of statisticians and policy experts. In particular, the UIS will regularly improve the functionality of its online Data Centre, notably by offering new tools to extract data and customise data visualizations.

Overall, the UIS will, at a minimum, meet industry standards and best practices with regards to the dissemination of its data and metadata. To this end, the Institute will take an active role in the OECD-led Statistical Information Systems Collaboration Community (SIS-CC), which is a consortium of national and international statistical organizations. The consortium allows the Institute to leverage resources and investments made in data dissemination by joining forces with other organizations with similar needs.

All of these activities will entail regular user-testing to ensure that the products and the UIS Data Centre as a whole meet the needs of its audiences. In addition, the penetration rate of mobile technologies, tablets and smartphones will be addressed in larger communication and dissemination strategies. The UIS will commit to providing a basic user experience of high quality in these areas, while any further initiatives are undertaken in partnership with other statistical agencies or UNESCO on a cost-sharing basis.

Strategic directions and outcomes in this area include:

\$12 million / year

\$15 million / year

(i) Improve the tools and user experience of the UIS Data Centre and website.

OUTPUTS:

- Implementation of best practices in statistical data dissemination.
- Tools to allow users to build statistical tables, charts, graphs, as well as other data visualizations in the UIS Data Centre.
- Effective and efficient search capabilities to provide user-friendly tools to navigate the rich collection of UIS online resources and to maximise rankings on major Internet search engines.
- Regular improvements to the dissemination tools and annual user surveys.

(ii) Develop new types of web products and electronic publications to promote UIS data.

OUTPUTS:

- Wider range of data visualization products and applications presenting UIS data for inclusion in the websites of UNESCO and partners, such as other UN agencies, donors, NGOs, etc.
- Public API (application program interface) to support open data initiatives and enable external users and developers to build their own tools to present UIS data, which will promote the use of UIS indicators.
- 'My Statistics' portal to provide frequent users of the UIS Data Centre with the ability to save their favourite data views, products and customised products in a personal workspace available for consultation.

(iii) Innovative use of social media and other emerging opportunities to better communicate the 'stories' or main messages behind the data.

OUTPUTS:

- Greater visibility of UIS data and statistical products.
- Increased traffic to the UIS website.

(iv) Integrate UIS data products in wide range of third-party websites and online platforms.

OUTPUTS:

- Interactive data tools designed for diverse audiences including schools, media outlets, data aggregators, etc.
- UIS-tailored training products to promote evidence-based policymaking.

Monitoring

- UIS Data Centre improvements are introduced regularly;
- Annual user feedback activities are undertaken and integrated into the dissemination programme;
- UIS statistical content is integrated and clearly visible on UNESCO national and regional websites; and
- User satisfaction, as measured by surveys, has improved and site usage, as measured by website metrics, has increased.

Priority 3: Improving data quality

The UIS will continue to implement and develop initiatives designed to improve the different dimensions of data quality, which include accessibility, clarity, transparency, coherence across sources, comparability, completeness, consistency over time, efficient use of resources, policy relevance, potential for disaggregation, timeliness, as well as validity and reliability.

During the 2014-2021 period, UIS initiatives to improve data quality will specifically aim to increase reporting of key monitoring data by more countries, especially the least developed; ensure greater cross-national comparability of data; and develop new indicators that directly reflect policy priorities (*see Priority 2*). To support these initiatives, the UIS will continue to:

- develop, update and implement international standards;
- provide training and capacity-development services to national statisticians and line ministries; and
- improve the efficiency of data collection, processing, verification and dissemination.

A. DEVELOP AND APPLY INTERNATIONAL STANDARDS

Clear, well-defined standards serve as the foundation for frameworks designed to produce cross-nationally comparable data. The UIS will continue to develop and update statistical standards in the fields of education, STI, culture and communication. In addition, the Institute will continue to work with national authorities to implement these standards across all relevant international data collections.

The UIS will also ensure that UNESCO standards are incorporated into other international initiatives. This will occur notably by contributing to the revision of international standards under the responsibility of the United Nations Statistical Division, International Labour Organization, International Organization for Standardization and other agencies.

Strategic directions and outcomes in this area include:

\$12 million / year

(i) Improve international statistical frameworks and promote relevant standards at the national level in the fields of education, STI, culture and communication.

OUTPUTS:

- Develop guidance in relation to national education accounts.
- Develop guidance on how to nationally collect and internationally report data on private expenditure on education.
- Develop guidance on the collection and use of education indicators from population censuses and household surveys.
- Expand and update the *2009 UNESCO Framework for Cultural Statistics*.
- Collaborate with international partners to improve the culture component of international classification systems.
- Update the *1984 Manual for Statistics on Scientific and Technological Activities* as well as the related recommendation of 1978.
- Expand and update the *UIS Guide to Measuring Information and Communication Technologies in Education*.
- Contribute to the UNESCO Media and Information Literacy Framework.

(ii) Mainstream the use among national statisticians of the 2011 International Standard Classification of Education (ISCED 2011) and the revised classification on fields of education (ISCED-F).

OUTPUTS:

- Countries reporting education data according to ISCED 2011 and to ISCED-F.
- Up-to-date ISCED 2011 mappings of national education systems validated by governments and published on the UIS website.
- Review of ISCED 2011 to assess need for further revisions.
- UIS education databases redesigned in accordance with ISCED 2011 mapping.
- Historic time series of key indicators revised in accordance with ISCED 2011.

Monitoring

- Number of national statisticians trained on new or revised standards; and
- Number of countries reporting data according to new or revised standards.

B. TRAINING AND CAPACITY BUILDING

Activities designed to improve data quality depend on the capacities and commitment of national statisticians and experts, who are vital partners for the UIS. The UIS will seek to leverage this relationship through a number of capacity-building initiatives, such as the training workshops which are undertaken by the UIS in its fields of competence (as described in the Main Lines of Action).

In response to the rising demand for education data, the UIS will continue to work with national teams to assess the quality of national education information systems and international reporting by applying a range of diagnostic tools (e.g. data plans, data quality assessments, etc). The Institute will also provide technical assistance, training and related materials to reinforce national education information systems and to encourage the use and analysis of statistical outputs for evidence-based policymaking. These initiatives will reinforce the regular cycle of training workshops, which are conducted at regional and country levels.

To maximise the efficiency and effectiveness of these initiatives, the UIS has established a network of statistical advisors who provide critical support in the field. The statistical advisors will provide a range of different services depending on the needs of Member States: from technical assistance and training to individual help completing survey questionnaires and resolving bottlenecks between different government bodies

responsible for statistics in order to promote evidence-based policy planning. UIS field staff will also work closely with national authorities to develop and reinforce national statistical strategies (in UNESCO's fields of competence) and integrate them in larger sector-wide planning and monitoring initiatives.

The field staff will also work closely with UIS Headquarters to improve data quality, especially in terms of the collection and verification of administrative data. They will also identify and evaluate alternative data sources (such as household surveys and censuses) which may be used to improve the UIS database and national databases.

At a minimum, the UIS will maintain its field presence in the following regions: Arab States, Asia and the Pacific, Latin America and the Caribbean, as well as sub-Saharan Africa. Future decisions concerning deployment will be based on UNESCO's larger reform of its field offices and available resources.

Strategic directions and outcomes in this area include:

\$12 million / year

(i) Produce data plan documents to reduce the effects of high turn-over among staff in national statistical offices, which impedes the reporting of cross-nationally comparable data.

OUTPUTS:

- Documentation of data sources and methodologies to ensure sustainable reporting.

(ii) Conduct data quality assessments on demand from priority countries in all regions.

OUTPUTS:

- Diagnostic studies of national systems for data collection, processing and use.

(iii) Provide training and technical support to countries on the implementation of international standards and UIS methodologies.

OUTPUTS:

- Improved data quality at the national, regional and international levels by reinforcing the collection and analysis of administrative data and integrating, where relevant, information from other data sources (e.g. household surveys).
- Advisory services tailored to the specific needs of countries (with an expert who understands the national language, culture and policy needs).
- Guidance for national statisticians in applying and using international standards.
- Dissemination of best practices in data collection, processing and analysis to address the information needs of Member States.

(iv) Work with countries and regional partners to integrate education, STI, culture and communication data within national statistical development plans and strategies, in order to make the most efficient use of available resources.

OUTPUTS:

- Statistical information and monitoring for UNESCO's regional programme activities, action plans and strategies, as well as for sector-wide and cross-sectoral plans used by national governments, international agencies and donors.

Monitoring

- Improvement in the quality of data submitted by Member States tracked through the UIS Quality Monitoring Framework;
- Improvements in sustainability of national capacities at institutional, technical and individual levels related to the production and use of statistical information and international comparisons;
- The number of countries applying international standards in data collection; and
- Actions taken by countries to address problems in statistical systems.

C. IMPROVING THE EFFICIENCY OF DATA COLLECTION AND EXCHANGE

For the UIS, all facets of data quality are essential in light of its unique mandate. Yet clearly, decisions must be made when targeting efforts to improve data quality. In some situations, priority will be given to improving the timeliness of data while other initiatives will focus on accuracy or policy relevance, as in the case of the regional data collections. Previous sections of this document describe efforts to improve the Institute's outputs, but it is also essential to improve the instruments and procedures used to collect, process and disseminate data.

The UIS has established a framework to evaluate and report on the quality of its data collection processes. The UIS will continue to produce these reports in order to identify areas for improvement and monitor progress. In addition, the UIS will add a new component to the data quality assessments undertaken by UIS field staff and national statisticians. This will consist of a national scorecard to identify linkages between weaknesses in national statistical systems and larger measures taken to improve data quality at the international level.

The UIS will strengthen its data collection activities in order to meet the increasing demand for more policy-relevant global, regional and sub-regional data and indicators while increasing response rates to our surveys. New processes and systems, such as SDMX, will be

implemented to leverage technological improvements which will improve the efficiency of data collection and processing for both the Institute and survey respondents. Careful attention will be paid to the user-experience to manage respondent burden and ensure that countries can easily and efficiently deliver data to the Institute.

The UIS will also update its data exchange systems in order to work efficiently with a wider range of partners. In particular, the UIS will implement the SDMX standard, which has been recommended by the UN Statistical Commission and is being adopted by many statistical agencies. The main objective is to improve the exchange of statistical information between agencies using common standards, definitions, formats and technology.

Strategic directions and outcomes in this area include:

\$12 million / year

(i) Improve the collection and processing of statistical data and metadata, taking into account the entire data lifecycle.

OUTPUTS:

- Targeted and country-specific interventions to improve data quality undertaken at the national level based on country-specific assessments and analyses.
- UIS Quality Framework extended to include all programme areas and updated to reflect regional and modular approaches to data collection.
- New targets and action plans established for performance indicators used to monitor UIS data quality.

(ii) Reduce duplication of efforts among international organizations by developing better mechanisms to share data and metadata with users.

OUTPUTS:

- Efficient and secure data exchange mechanisms established to support regional partnerships and data collections.
- Improved coordination and efficiency between UIS, OECD, Eurostat and other organizations engaged in international data collection and data sharing arrangements.
- Reduced respondent burden when collecting administrative data from national ministries.

Monitoring

- Expanded UIS Data Quality Report that includes all surveys, questionnaires and data outputs;
- The inclusion of data quality improvement targets, action plans and monitoring information in UIS annual work plans and reports;
- National monitoring scorecard developed and piloted in countries resulting in country-specific recommendations on improving data quality;
- SDMX for UIS/OECD/Eurostat collaborations in education and R&D statistics defined and implemented; and
- Updated methods and instruments to improve data collection at the national level.



Table 1. Estimated Monthly Sales (in millions of dollars)

Year	Q1	Q2	Q3	Q4	Total
2012	1,287.07	1,227.09	1,194.30	1,577.98	5,286.44
2013	1,364.07	1,308.70	1,353.07	1,676.78	5,602.62
2014	1,408.56	1,382.24	1,428.88	1,767.89	5,987.57
2015	1,452.19	1,456.54	1,500.75	1,868.48	6,278.96
2016	1,495.82	1,529.88	1,573.86	1,972.17	6,571.73
2017	1,539.45	1,603.22	1,646.95	2,075.86	6,865.48
2018	1,583.08	1,676.56	1,720.04	2,179.55	7,159.23
2019	1,626.71	1,749.90	1,793.13	2,283.24	7,452.98
2020	1,670.34	1,823.24	1,866.22	2,386.93	7,746.73
2021	1,713.97	1,896.58	1,939.31	2,490.62	8,040.48
2022	1,757.60	1,969.92	2,012.40	2,594.31	8,334.23
2023	1,801.23	2,043.26	2,085.49	2,698.00	8,627.98
2024	1,844.86	2,116.60	2,158.58	2,801.69	8,921.73
2025	1,888.49	2,190.00	2,231.67	2,905.38	9,215.48
2026	1,932.12	2,263.40	2,304.76	3,009.07	9,509.23
2027	1,975.75	2,336.80	2,377.85	3,112.76	9,802.98
2028	2,019.38	2,410.20	2,450.94	3,216.45	10,096.73
2029	2,063.01	2,483.60	2,524.03	3,320.14	10,390.48
2030	2,106.64	2,557.00	2,597.12	3,423.83	10,684.23

Table 2. Percent Changes for Sales

Year	Q1	Q2	Q3	Q4	Total
2012	0.00	0.00	0.00	0.00	0.00
2013	5.86	5.86	5.86	5.86	5.86
2014	6.72	6.72	6.72	6.72	6.72
2015	7.58	7.58	7.58	7.58	7.58
2016	8.44	8.44	8.44	8.44	8.44
2017	9.30	9.30	9.30	9.30	9.30
2018	10.16	10.16	10.16	10.16	10.16
2019	11.02	11.02	11.02	11.02	11.02
2020	11.88	11.88	11.88	11.88	11.88
2021	12.74	12.74	12.74	12.74	12.74
2022	13.60	13.60	13.60	13.60	13.60
2023	14.46	14.46	14.46	14.46	14.46
2024	15.32	15.32	15.32	15.32	15.32
2025	16.18	16.18	16.18	16.18	16.18
2026	17.04	17.04	17.04	17.04	17.04
2027	17.90	17.90	17.90	17.90	17.90
2028	18.76	18.76	18.76	18.76	18.76
2029	19.62	19.62	19.62	19.62	19.62
2030	20.48	20.48	20.48	20.48	20.48

Hand holding a black pen, pointing at a line graph on a document.

Hand pointing at a line graph on a document.



Human, financial and material resources

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Human resources management

The UIS relocated to Montreal in 2001 with just nine staff members. Today, the Institute has about 110 staff members employed in Montreal and the field. The Institute is currently structured into the following sections and units:

- Director's office includes the Data Outreach, Advocacy and Publications unit, Field Coordination unit and Regional Statistical Capacity Building unit;
- Administration, Finance and Human Resource management;
- Education Indicators and Data Analysis section with two Regional units and a Methodology unit;
- Learning Outcomes section;
- Science, Culture and Communication section; which includes units for each area of action;
- Statistical Services and Technology section, with Statistical information Systems unit and Data Processing and Standards unit.

While containing staff costs, the UIS will seek to reinforce its human resources through internships, secondments and associate expert schemes financed by governments and other organizations. These types of programmes strengthen the Institute, while providing valuable experience to the individuals involved.

The UIS is well established on the premises of the *Université de Montréal* campus with additional office space financed, in part, by the Governments of Canada and Quebec through Montreal International. The UIS, *Université de Montréal* and Montreal International are exploring potential locations to accommodate all UIS employees in a single location.

Financial resources

The UIS has full financial autonomy and finances its operations using a special account established by the Director-General of UNESCO with the endorsement of the Organization's Executive Board.

To respond to emerging statistical needs of Member States, the UIS will continue to seek extra-budgetary resources to supplement regular financing from UNESCO. For the first Medium-Term Strategy of 2002-2007, the Institute received US\$24.8 million from UNESCO and US\$25.0 million in voluntary contributions. For the second Medium-Term Strategy of 2008-2013, the Institute received US\$24.6 million from UNESCO and US\$44.9 million in extra-budgetary resources.

For the 2014-2021 Medium-Term Strategy, the UIS requires an annual budget of at least US\$12.5 million in order to provide the minimum in terms of core services. Yet given the rising demands for data, ideal funding levels should reach US\$15 million per year by about 2018.

As shown in the detailed strategic directions, the Institute has anticipated additional goals in all priority areas if additional funds are secured. Following the UNESCO financial crisis in 2011, the Organization's financial allocation to the Institute fell from US\$4.6 million to US\$3.8 million per year for the 2013-2014 biennium. Therefore, the UIS is seeking to expand existing agreements with current donors, while pursuing new sources of funding from other organizations and governments.

The UIS has found that multi-year funding arrangements are the most effective and efficient means to pursue core programme activities. In addition, the UIS will also apply for earmarked funding for priority projects but will seek to ensure that the associated overhead costs are fully covered. Thus its efforts are self-sustaining and do not divert resources from the core priorities identified in this strategy.