

Lloyd's Register Graduate Scheme – ein (modulares) Weiterbildungsprogramm für lebenslanges Lernen in der maritimen Wirtschaft

Supporting education, training and research

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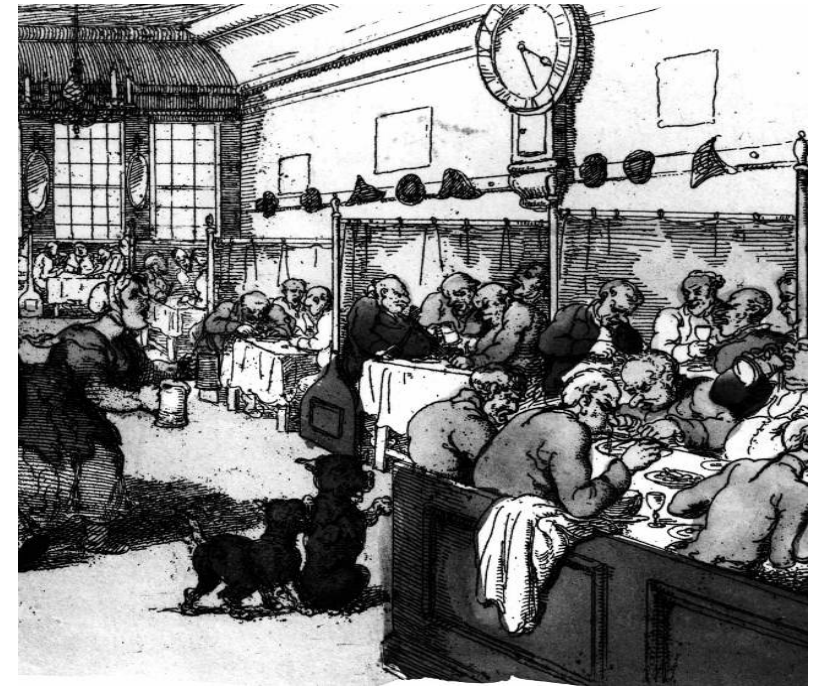
Agenda

- How we started
- Our approach to global education
- Education and Risk
- Lloyd's Register Educational Trust (LRET)
- Graduate Training Programme



Lloyd's Register Group

- Gegründet 1760 – erste Schiffsklasse weltweit
 - ☛ Keine Verwandtschaft mit der Versicherung „Lloyd's“ in London
- Keine Shareholder – „Total“ unabhängig und unparteiisch
 - ☛ Geführt durch das „General Committee of Industry Representatives“
- Gewinne werden nicht ausgeschüttet sondern...
 - ☛ zur Entwicklung neuer Verfahren, gemeinnützig verwendet wie durch den „Educational Trust“ zur Förderung von Ausbildung/Training und Forschung bereitgestellt



It started with a cup of coffee...

Watch the time change and witness Lloyd's Register's evolution from a successful eighteenth century business into a dynamic twenty-first century enterprise.



Savannah, built in the USA in 1818, was the first steamer to cross the Atlantic and the second steamer to be classed.



Lloyd's Register's Coat of Arms, granted in 1957, is specially designed to represent its amphibious activities.



Lloyd's Register Quality Assurance (LRQA) is formed in 1985.

The *Lloyd's Register of Ships* is classed as a secret document during both World Wars. Spies obtain copies which are reproduced and placed onboard German navy capital ships and submarines. Pictured, Commander Lothar de la Perrière of U-35 deletes the entry for the recently torpedoed *Brisbane River*.

<p>1760</p> <p>A Society for the Registry of Shipping is formed by customers of Edward Lloyd's coffee house, London. They employ retired sea captains to inspect and classify vessels which call at 16 ports in the UK from all over the world.</p>	<p>1799</p> <p>A dispute over the system of classification leads to the publication of two rival Registers; namely the shipowners' red book and the underwriters' green book. This is resolved in 1814 when they reconstitute as Lloyd's Register of British and Foreign Shipping.</p>	<p>1818</p> <p>Technological innovations with the change from sail to steam lead Lloyd's Register to class its first steamer in 1818, first iron vessel in 1837, and first steel vessel in 1867.</p>	<p>1834</p> <p>A General Committee is formed to ensure Lloyd's Register's independence and integrity.</p>	<p>1835</p> <p>Lloyd's Register takes the initiative over load lines in 1835, instituting what becomes known as Lloyd's Rule. In the 1870s Chief Ship Surveyor Benjamin Matfield discusses his detailed research on the subject with Samuel Plimsoll.</p>	<p>1853</p> <p>The Maltese cross is first used to indicate vessels built under Special Survey of Lloyd's Register.</p>
<p>1869</p> <p>The opening of the Suez Canal reduces the distance between Europe and Asia by several thousand miles.</p>	<p>Following a revision of the <i>Rules</i>, the iron sailing barque, <i>Lisie Leale</i>, is the first to receive the new class notation #100A1 in 1870.</p>	<p>1870s</p> <p>Refrigeration makes meat transportation a viable commercial activity, allowing exports from Australia, New Zealand and Argentina to Europe.</p>	<p>1880s</p> <p>Electricity on board ships becomes widespread, and the age of the modern oil tanker is born.</p>	<p>1900</p> <p>The tonnage of the average ship increases by ten times. Lloyd's Register surveys steam turbines and internal combustion engines.</p>	<p>Turbine of the <i>Mauretania</i>, built by Swan Hunter & Wigman Richardson, Newcastle, for Cunard Steam Ship Company Ltd. in 1907.</p>
<p>1929</p> <p>Despite world recession, marine technology advances rapidly and large passenger ships are built to transport emigrants to the New World.</p> <p>International Conference on the Safety of Life at Sea is held in London</p>	<p>Lloyd's Register inspects high pressure boilers for the Gresley W1 No. 10000 locomotive.</p>	<p>1930</p> <p>International Convention on Load Lines is adopted. Industrial inspections include a power station in Montevideo, Uruguay, and advice on oil refineries in Iraq and Iran.</p>	<p>Mulberry Harbours.</p>	<p>1939</p> <p>The Second World War dramatically increases demand for surveys. Advice is given on novel projects such as the Mulberry Harbours, refrigeration units fitted in Army tanks bound for North Africa, and the British standard shipbuilding schemes in the USA and Canada.</p>	<p>1914</p> <p>Opening of the Panama Canal saves time and boosts cargo-liner services.</p> <p>First Safety of Life at Sea (SOLAS) convention is held in response to the <i>Titanic</i> disaster of 1912.</p> <p>During the First World War 10 million gross tons of new ships are surveyed by Lloyd's Register.</p>
<p>1959</p> <p><i>Adma Enterprise</i> becomes the first Lloyd's Register inspected mobile drilling rig to come on stream.</p>	<p>1960s</p> <p>Supertankers push the boundaries of ship design.</p>	<p>1962</p> <p>The Magnus power station at Bradwell is amongst the first in the UK, coming on stream in 1962.</p>	<p>1970s</p> <p>The cruise liner industry takes off.</p> <p>Lloyd's Register approves manufacturer's quality control arrangements; inspects space telescopes; and is heavily involved in offshore projects in the North Sea and around the world.</p>	<p>The LNG tanker, <i>Gratania</i>, is built by Daewoo Shipbuilding and Marine Engineering Co. (DSME) for Shell in 2003.</p>	<p>1945</p> <p>Surveyors advise in formerly occupied countries on rebuilding work and wreck removal from harbours to allow essential supplies to quickly reach areas decimated by war.</p>
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<p>2010-05-05 in Hamburg</p>	<p>Lloyd's Register celebrates 250 years of bringing service and quality to the world, while looking forward to the new challenges that the future brings.</p>	<p>LIFE MATTERS</p>	<p>LIFE MATTERS</p>	<p>LIFE MATTERS</p>	<p>LIFE MATTERS</p>

250 YEARS OF SERVICE

250 YEARS OF SERVICE

Lloyd's Register Group

Business Structure:

Marine

Energy (Upstream/Downstream)

Transportation

Management System Business



250
YEARS
OF SERVICE

Lloyd's
Register
LIFE MATTERS

2. Our approach to global education [ISF Tagung 2010]

Sicherheit → Risikomanagement → Ausbildungskonzept
→ ein modulares Konzept

Ausgangslage:

- Die Erwartung an die Sicherheit in der Schifffahrt wird zunehmen, sowohl an Bord als auch in Häfen und Revieren / Wasserstrassen.
- Der Einfluss des menschlichen Faktors im komplexen Schiffsbetrieb wird steigen, da mit technischer Zuverlässigkeit bzw. technischer Sicherheit allein ein komplexes System nicht mehr hinreichend beherrschbar ist.
- Spezialisierte Ausbildung wird von Bedeutung fuer weiteren Imagegewinn der Schifffahrt.

→ Beispiel: Offshore Wind Energy- A real Challenge for education

- **Sophisticated vessels**
 - Oceanographic Survey Vessels
 - Crane Vessels
 - Jack-Up Barges
 - Cable Layers
 - Platform Supply Vessels
 - Crew Boats
 - Diving Support Vessels, ...
- **Specialised Operations**
 - Dynamic Positioning Systems
 - Heave Compensation
 - Personal Transfer Systems



- **People**
 - Specialised Crews
 - Training will be key
 - Simulator training (?)



Lloyd's Register Group

LLOYD'S REGISTER ODS



Engineering consultancy specialising in noise and vibration analysis



Human Engineering

Human factor specialists supporting design projects and operational & safety management activities



Risk management specialists in the oil & gas upstream sector



Ryerson, Master and Associates, Inc.

Environmental verification specialists in North America

→ Life-Long training and development – heißt auch: Einbeziehung der gesamten fachlichen Kompetenz eines Unternehmens (Subsidiary companies) → ganzheitlich
Ansatz



Engineering specialists providing plant integrity and reliability services



Process engineering and process safety consultancy



Smart Solutions for Engineering, Science & Computing
Advanced engineering solutions



SCANDPOWER
Risk Management

Risk management specialists



LIFE MATTERS

3. Education and Risk – Opportunity and Threat

- 'Threats to the achievement of a company's objectives and goals and to the successful execution of its strategies.
Including threats of **bad things happening** and **good things not happening.**'
Reference: Australian Stock Exchange, Risk Management Policy

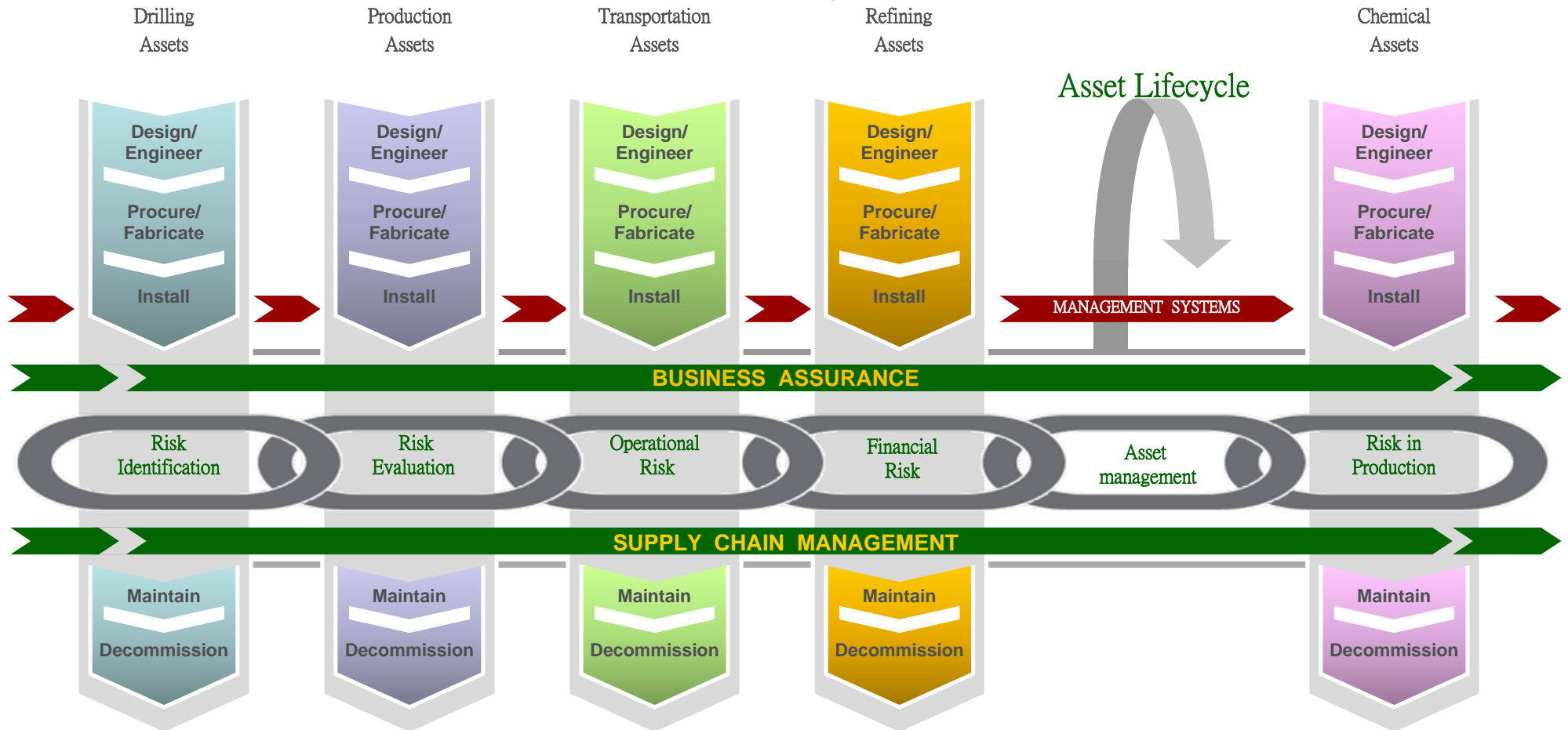


Ship Operations – a risky business ?

- Ship operations – a risky business?
- Risks
 - Technical
 - Operational
 - Procedural
 - Educational –Human factor
 - Social
 - Environmental
 - Commercial
 - Legal
- Risks are part of any activity
- Management of risks by mitigating risks
- Assurance in goal-based regulatory and business environments



Education & the "The life cycle concept"



Operational Risk management = f(Education)
A NEW Paradigm for Decision Taking

4. Der Lloyd's Register Educational Trust



- Set up in 2004 to enhance the contribution we make to public education.
- An independent charity with its own Board of Trustees and full-time Director.
- Areas of LRET funding:
 - pre-university education
 - university education
 - vocational training and professional development
 - research.

Objects of the Trust

→To advance the education of the public in the subjects of science, engineering and technology in particular through the provision of scholarships and grants to schools, colleges, universities and other organisations and to individuals of proven ability;

→To advance education and awareness in **safety and risk management** for the benefit of the public, in particular in the design, manufacture, construction, repair, operation and maintenance of transportation systems of any kind;

To preserve and protect life and property at sea, on land and in the air by:

- i) promoting high technical standards of design, manufacture, construction, maintenance, operation and performance; and
- ii) promoting high standards of management of safety within industry, in particular through funding research in centres of excellence and publishing the useful results of that research.

Sponsorship programme

- pre-university education 20%
- university education 20%
- vocational training and professional development 20%
- research 40%

Pre-university

- Qatar University
- Royal Observatory, UK
- Schools Marine Challenge, UK
- Smallpeice Trust, UK
- STEM IT
- Surrey SATRO, UK
- Young Engineers Clubs, including Young Engineer for Britain, UK



Pre-university support is focussed on projects and schemes for young students where the aim is to inform young people about science, engineering and technology. Through the schemes that are supported we aim to encourage young people to follow careers in science, engineering and technology and also to ensure that there is a wider general level of understanding of the importance of science, engineering and technology. Some examples will be presented to illustrate how the funding is being applied.

University education

- Australian Maritime College, Tasmania
- Cass Business School, UK
- **Scholarships at Bremerhaven University, Germany.**
- Student of the Year Awards, UK
- SNAME, USA
- United States Merchant Marine Academy
- University College London, UK

→ Further significant funding has been promised to the University of Western Australia to fund a Chair in Offshore Foundation Systems. This University provides fundamental and applied research solutions to the international offshore industry and produces high quality graduates in offshore geo-mechanics and engineering. The funding will allow engineers to overcome major challenges in harnessing energy from the oceans, particularly in finding novel solutions for renewable energy generation offshore.



Vocational training and professional development

- Royal National Lifeboat Institution
- Lectures,
- SeaVision
- Alert!
- Human element awareness campaign



Research

- Imperial College London, UK
- Lancaster University, UK
- National University of Singapore
- Pusan National University, Korea
- Seoul National University, Korea
- Technical University of Delft, the Netherlands
- University of Cardiff (Seafarers International Research Centre), UK



Future Plans

Over the next year we will continue to expand our donations programme by seeking suitable beneficiaries, with a focus on schemes that deliver value to the end recipient, with a preference for schemes based outside the UK. Continued support from the Lloyd's Register Group in the forthcoming year is envisaged.

Southampton - securing Our Future

To secure the future for the next 30 years and beyond, Lloyd's Register needs to ensure it continues to grow into a world class classification society with high technological and research capabilities, centralised in UK and supporting our global business

To do this it needs:

→ to follow the successful European business model of building on its expertise by co-locating business with research and a network of professional maritime industries

→to move to Southampton in 2014 and co-locate its expertise alongside the University of Southampton on their Boldrewood campus





Lloyd's Register

The image shows a detailed architectural elevation of a modern building complex. The main structure is a long, low-profile building with a prominent horizontal band of windows. Above this band is a thick, dark brown horizontal element. To the right, a taller, more vertical building is visible. The ground level is indicated by a wavy line. Labels are overlaid on the image to identify different parts of the complex.

Public area

Maritime Institute

University
of
Southampton



Graduate Training Programme

Kathrin Harms

HR Manager Central European Area

Content

1. Graduate Training Programme
2. Non-technical competencies of potential technical staff – observations of HR recruiters and recruiting managers.

Definition of Graduate Programme

- Designed for graduates from technical universities (specialisations: materials engineering, naval architecture, ship science, marine or mechanical engineering, electrical, control engineering and systems engineering)
- 2 years of trainings and development rotations
- A formal Training Programme with pre-determined training modules
- Support by mentors during the whole Programme
- Formal assessments and documentation of activity
- Cross-country mobility (Europe)

Overall objectives of the programme

To develop newly employed technical marine employees towards full surveyor status. After the program the employee is expected to:

1. Demonstrate sound technical approach, creative problem solving, exploiting emerging technologies
2. Demonstrate ability to apply appropriate theoretical and practical methods to the analysis and solution of the engineering problems.
3. Provide technical, commercial and managerial leadership (planning, organising, control, budgeting, staff management)
4. Use effective communication and interpersonal skills (interpersonal skills, presentations, negotiations, team building)
5. Make a personal commitment to live by the appropriate code of professional conduct, recognising obligations to society, the profession and environment.

Training modules

Introduction to LR and the Graduate Programme

Overview of the structure of LR and its various functions. Explanation of how the graduate scheme operates. Opportunity to build working relationships with mentors.

Location: Home office

Practical ship construction/repair

Practical experience of a wide range of ship construction or repair processes within a commercial environment.

Location: Client's premises

Practical field surveying (new construction/existing ships)

Working at an LR field office under the supervision of experienced surveyors to develop the knowledge and skills necessary to perform the duties of a field surveyor.

Location: LR field office

Training modules

Familiarisation with Class Rules and Statutory Regulations and Classification Services

their interaction and Marine

Practical experience of the plan approval process with particular emphasis on Statutory Regulations. An awareness of Ship Classification process, and relation to Statutory Regulations, Technical Performance Group and the impact of Port State Control

Location: London/Hamburg/Copenhagen/Rotterdam and Berlin offices

Basic Surveying Skills

An engineering course designed to provide practical experience of a range of basic fabrication skills and the operation and maintenance of marine machinery.

Training

Training modules

Personal safety training

To gain the knowledge and skills necessary to maintain personal safety in shipyard and marine environments.

Training

Practical ship operation

Seagoing trip to gain first hand experience of the operation and maintenance of a large working ship.

Location: Client's vessel

Candidate's profile

- We are looking for graduates with a MEng degree or BEng with an MSc in order to study towards CEng status in materials engineering, naval architecture, ship science, marine or mechanical engineering, electrical, control engineering and systems engineering.
- a genuine interest in the marine sector
- a love of travel and desire to work abroad, experiencing different cultures
- the ambition and confidence to become a technical specialist and a future leader at Lloyd's Register
- Fluent English (inc. technical vocabulary)
- Sound academic achievements

Recruitment and selection process

- application form on-line
- first interviews
- technical interview
- assessment centre (interview, a presentation, a group exercise, a case study and psychometrics)
- References check (university, employers if any)

Competencies assessed

- ABILITY TO LEARN - Understanding and interpreting new information
- TECHNICAL APPLICATION - Applying knowledge and skills to achieve results
- COMMUNICATION - Presenting information orally or in writing
- WORKING WITH OTHERS - Building effective working relationships
- CONFIDENCE - Capacity for self-reliance, knowledge of own limitations
- INTEREST AND ATTITUDE - Understanding the relevance of training and general interest
- COMMERCIAL AWARENESS - The ability to see engineering in a business environment
- ORGANISATION - Ability to manage work to make best use of time and resources

Experiences of recruiters from meetings with candidates for GTP

Quality of candidates is various - some of them are completely unprepared for meeting with employer and makes mistakes as below:

- Does not know the industry of potential employer
- Is unable to answer questions concerning demonstrating behaviours in the past (question type: 'give me an example of a time when...')
- Does not know how to present him/herself on Assessment Centre
- Is not able to combine engineering and business aspects
- Has problems to communicate clearly and assertively
- Does not visit Careers Offices at Universities

Lloyd's Register

LIFE MATTERS

The Lloyd's Register Group works to enhance safety and approve assets and systems at sea, on land and in the air – because life matters.

Thank you for your
attention

250
YEARS
OF SERVICE

Lloyd's
Register

LIFE MATTERS