

UNFC in Petroleum Resources Management of International Organisations, Governments and Industry

By

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Maximising economic recovery of petroleum requires...

International Treaties and Acts of Government

- Legal, fiscal and regulatory frameworks for efficient exploration and production
- Enhance knowledge of the resource base

Corporate frameworks

- Investor relations, Governance and Strategy
- Corporate memory and intelligence

Parallel functions

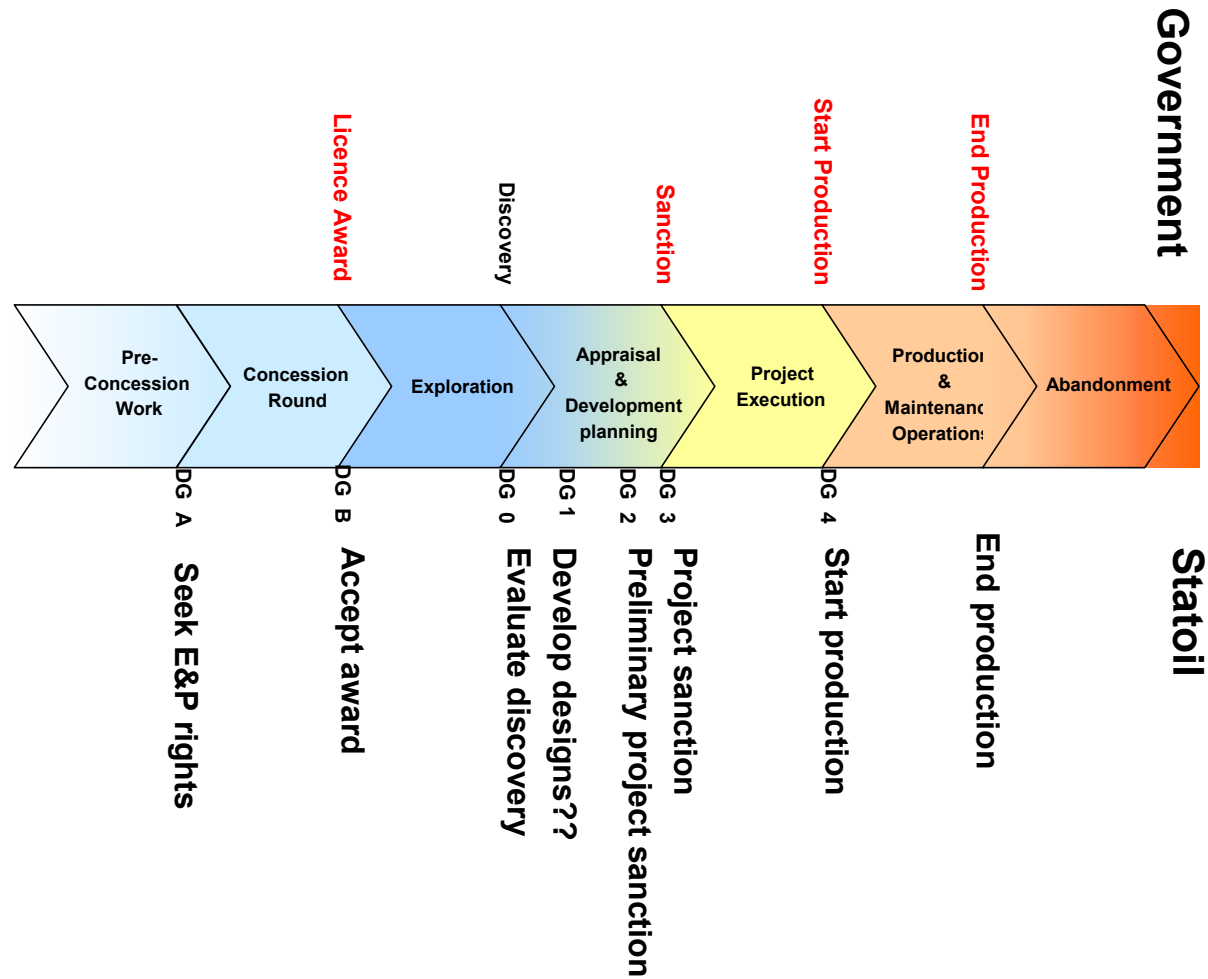
- Health, safety and environmental protection
- Value chain management from exploration to abandonment
 - Management of supply chains of all kinds
 - Product chain management
 - Management of opportunities and risks
 - Quality Partnerships

Health, safety and environmental protection need to be fully integrated in policies, designs and activities...

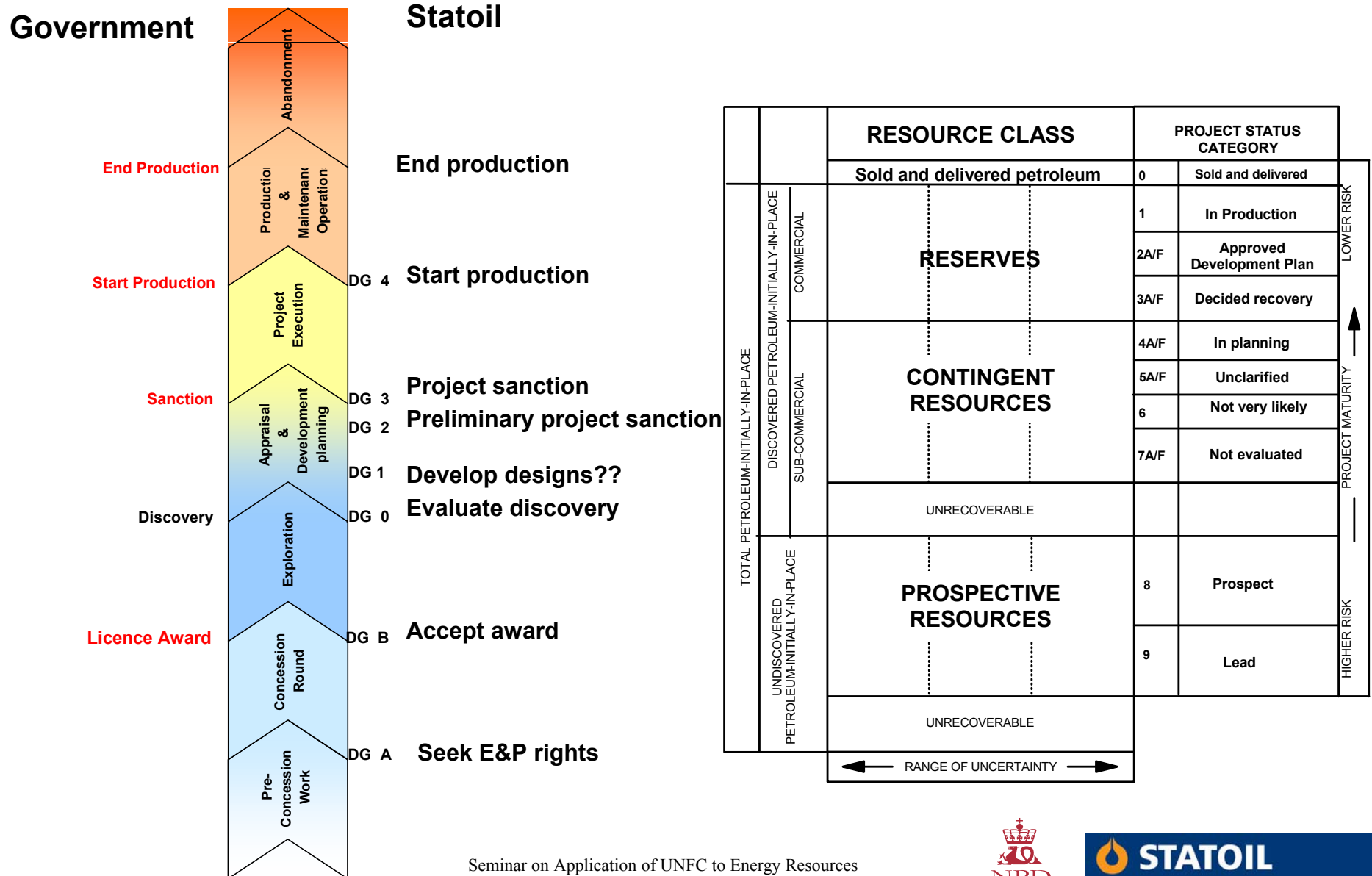
... high achievements in these fields is a good indicator, also of high sustainable efficiency.

Exploration and Production Value Chain

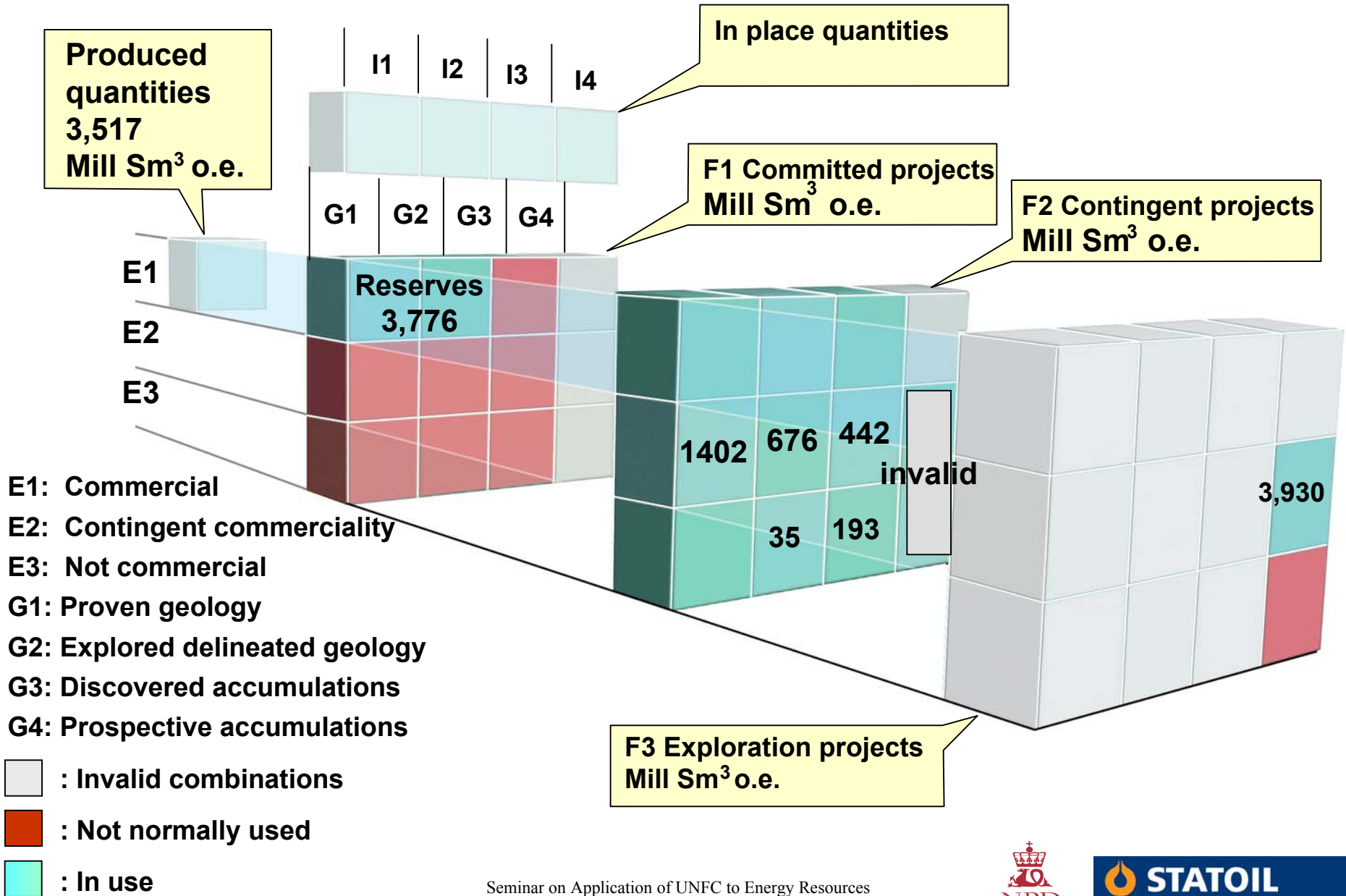
Decisions requires correct numbers...



E&P value chain management using project status categories



UNFC improves the view of the Norwegian resource base



11 August 2003

Seminar on Application of UNFC to Energy Resources
OPEC Secretariat
6th of May 2003



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Supply chain management:

Bring the market value of petroleum to the wellhead uneroded and safely...

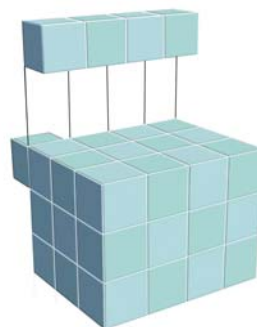
Government

- Policies
- Infrastructures
- Civil services

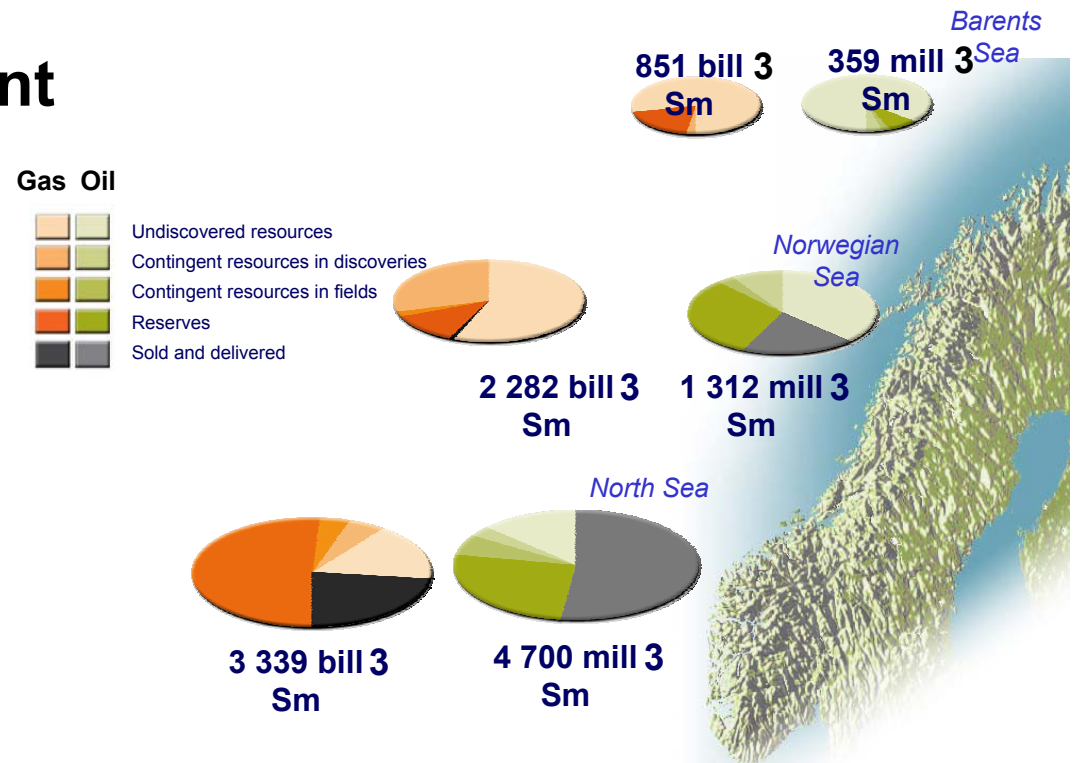
Statoil

- Technology
- Financial resources
- Management capacity

Tailored to the changing petroleum resource base



Product chain management



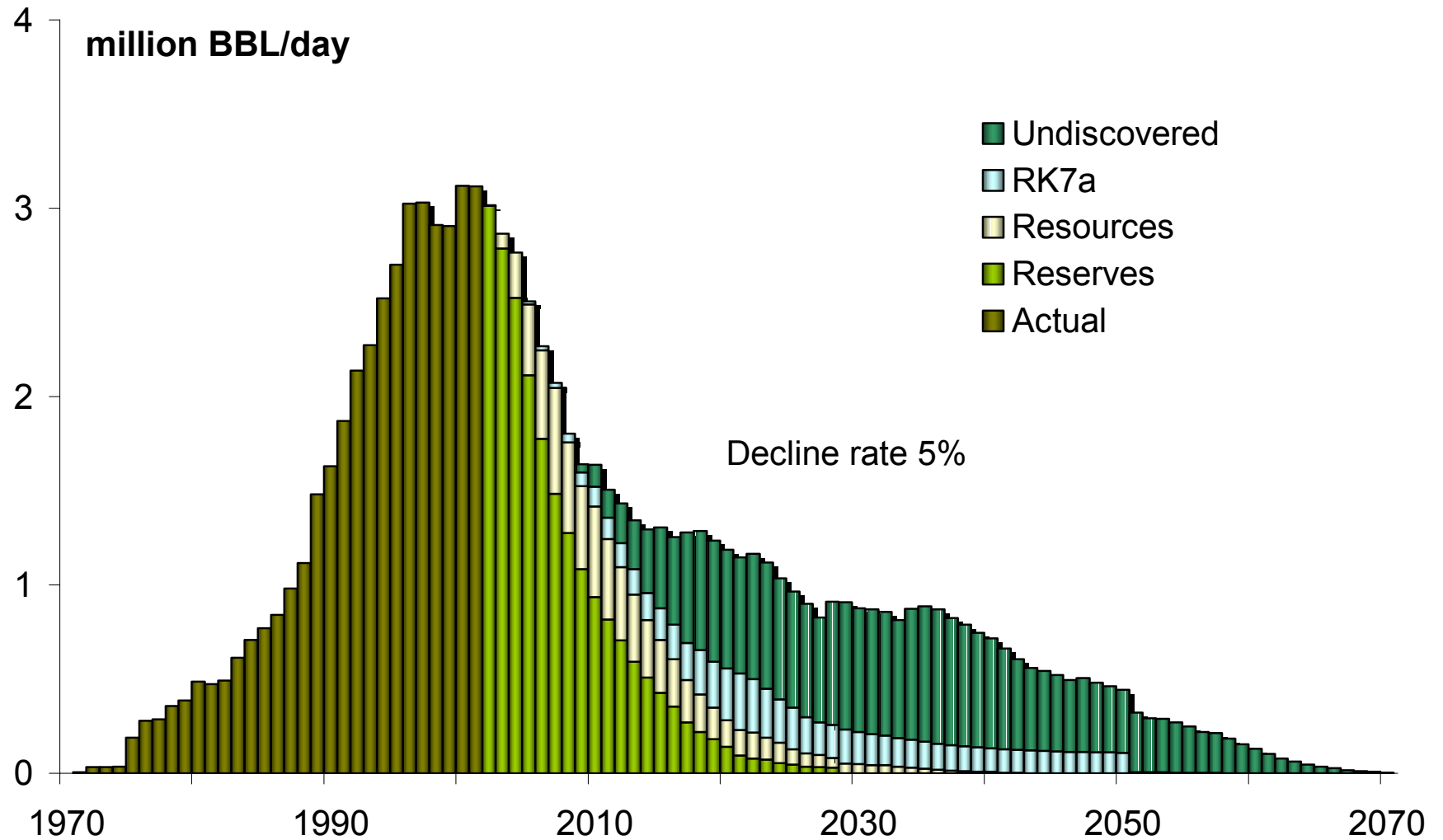
International organisations and Government

- Monitor markets
- Provide efficient frameworks
- Manage revenue risks

Statoil

- Maximise value of petroleum products (to the customer and the company)
- Monitor and manage corporate risks arising from product chain uncertainties (price, quantity and quality)

Norwegian Oil Production



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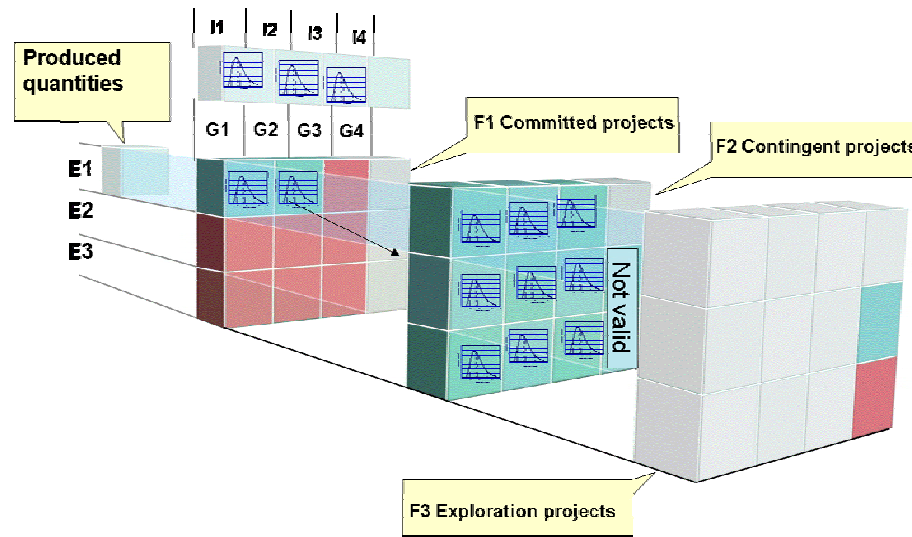
Corporate frameworks

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Opportunity and risk management



- **Understand uncertainties in the HES domain, the resource base, the facilities, the supply chains and product chains.**
- **Determine opportunities and risks specific to the portfolio taking into account dependencies, correlations and diversification**
- **Secure valuable options and exercise them at the right levels**

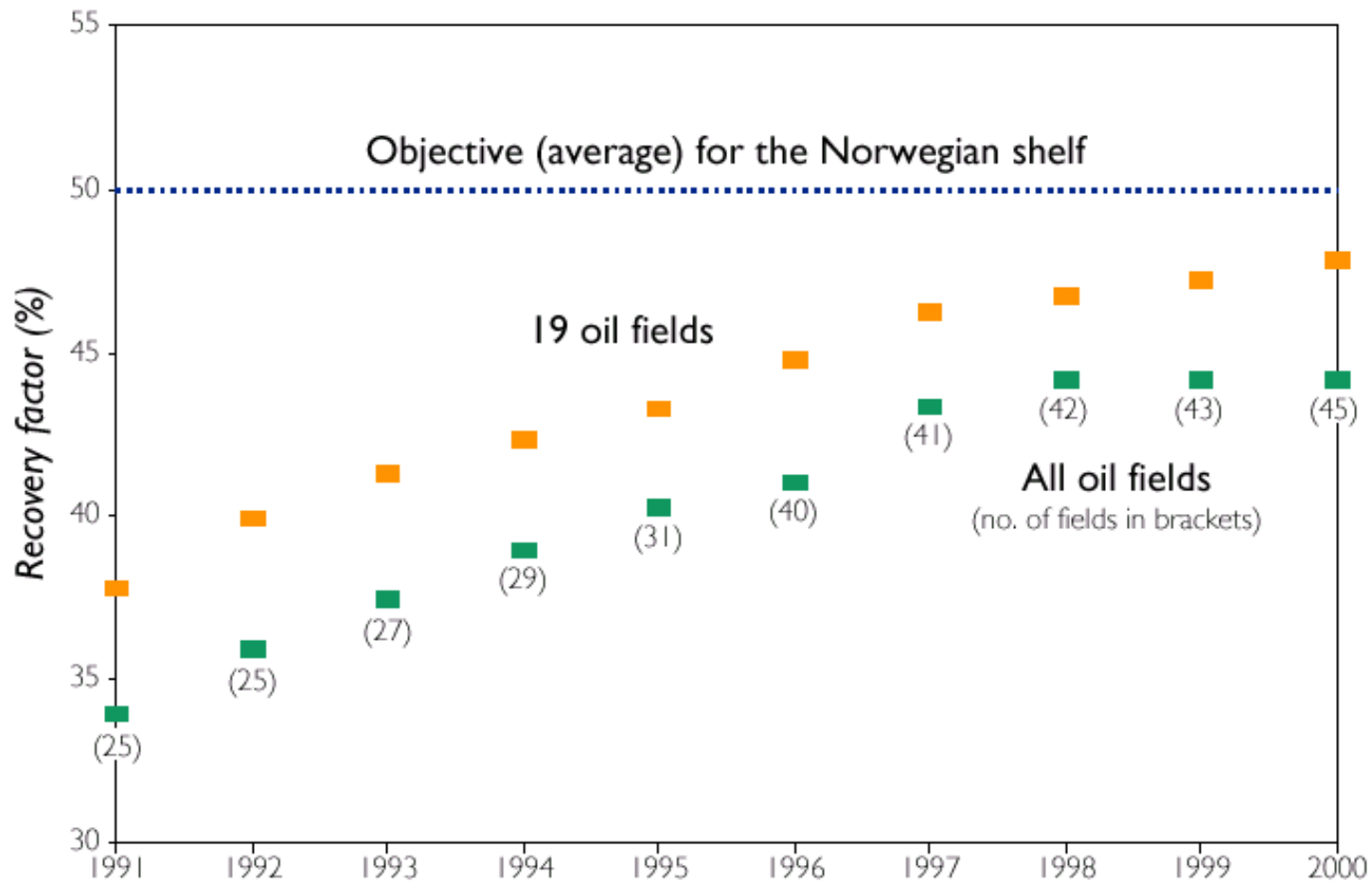


Fig. 37

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Corporate frameworks

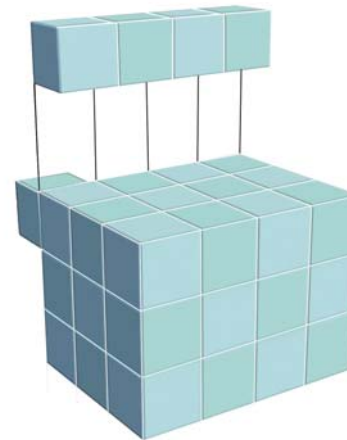
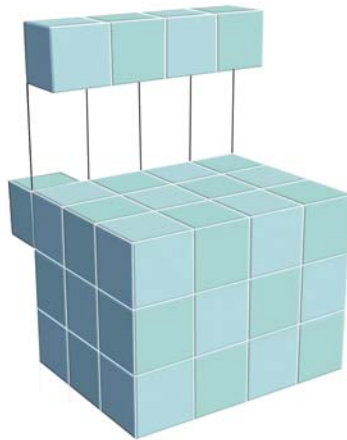
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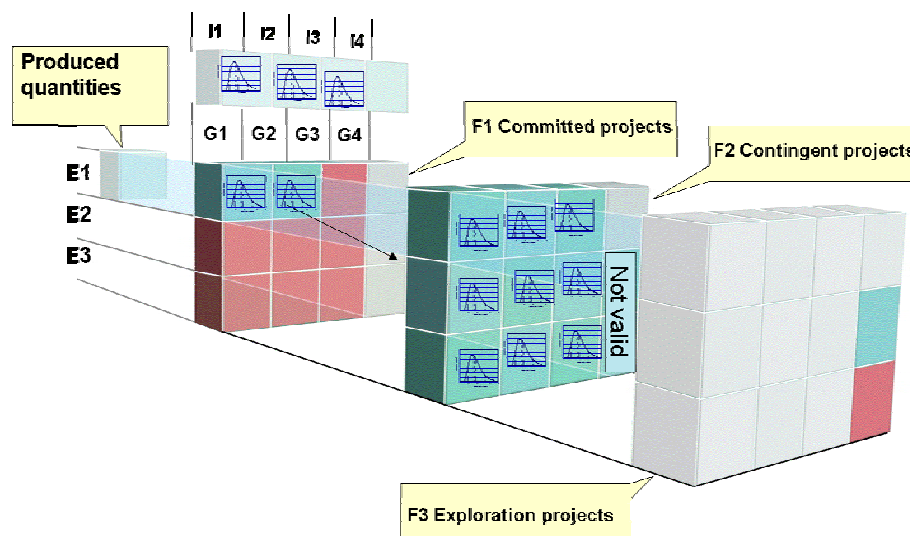
Why mention quality partnerships?

- **Decisions are often taken in partnerships**
- **Option values may be decisive... and they are not the same for everyone**
- **Partnership efficiency requires high level dialogues**
- **Alignment of interests with respect both to the primary object of a decision and the options it provides is required**



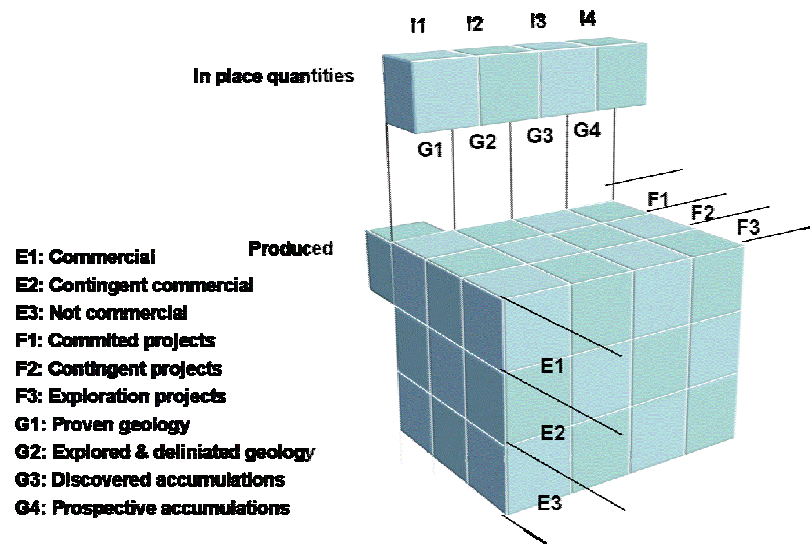
Elements for maximum economic recovery

1. Understanding of the petroleum resource base, including the irreversible nature of recovery processes
2. Deployment of petroleum where its value is highest and transfer that value to the wellhead uneroded when required
3. Predictable flexibility



Conclusion:

- **Efficient resource and industry management requires understanding of:**
 - The natural petroleum endowment (In place quantities)
 - Future production based on:
 - Economic potential (the E-Axis)
 - Field project maturity (The F-Axis)
 - Geologic definition (the G axis)
- **UNFC is designed to meet these needs**



“I’d rather be approximately right than precisely wrong”
(John Maynard Keynes)

Backup



Historical forecasts for oil production compared with actual oil production

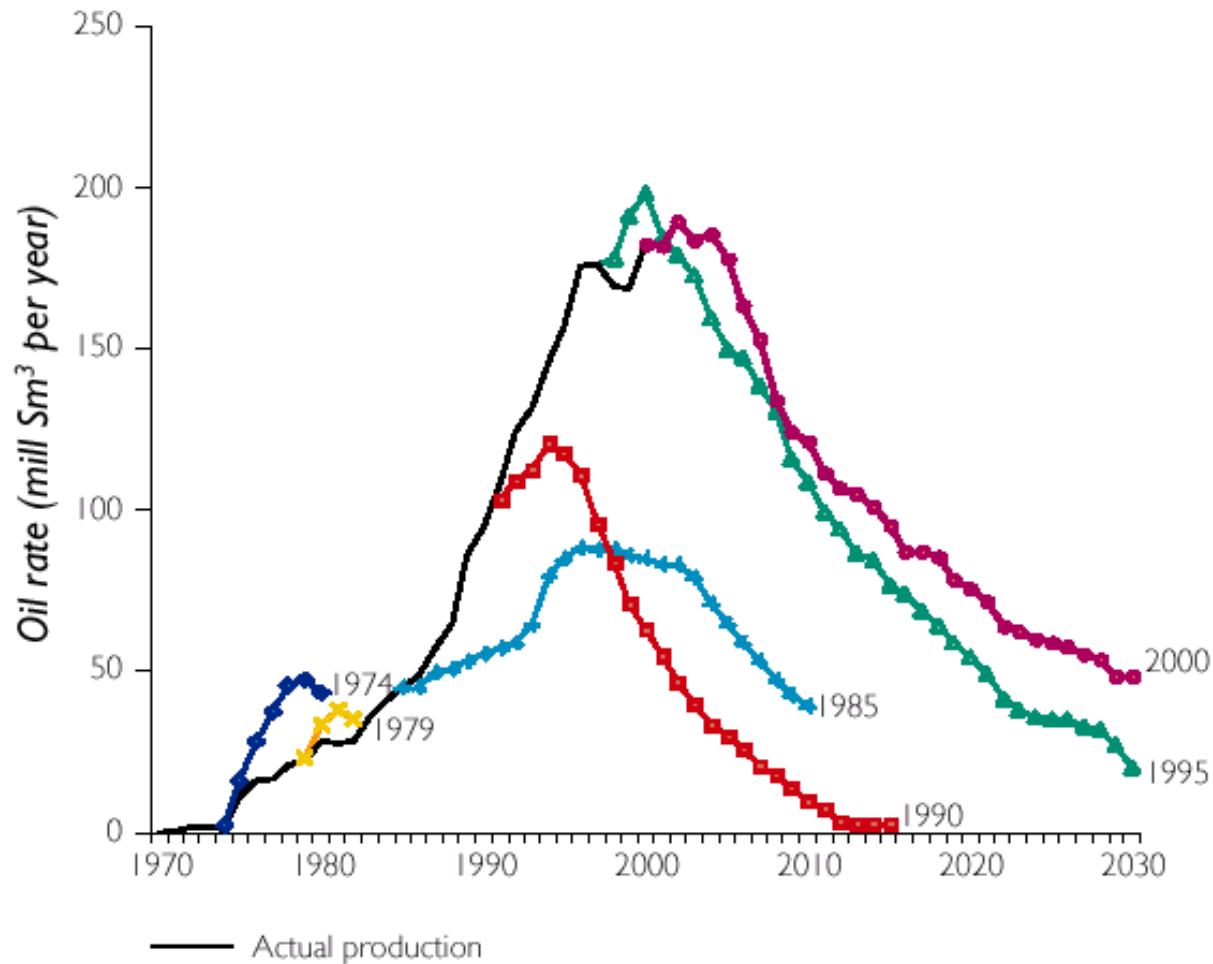
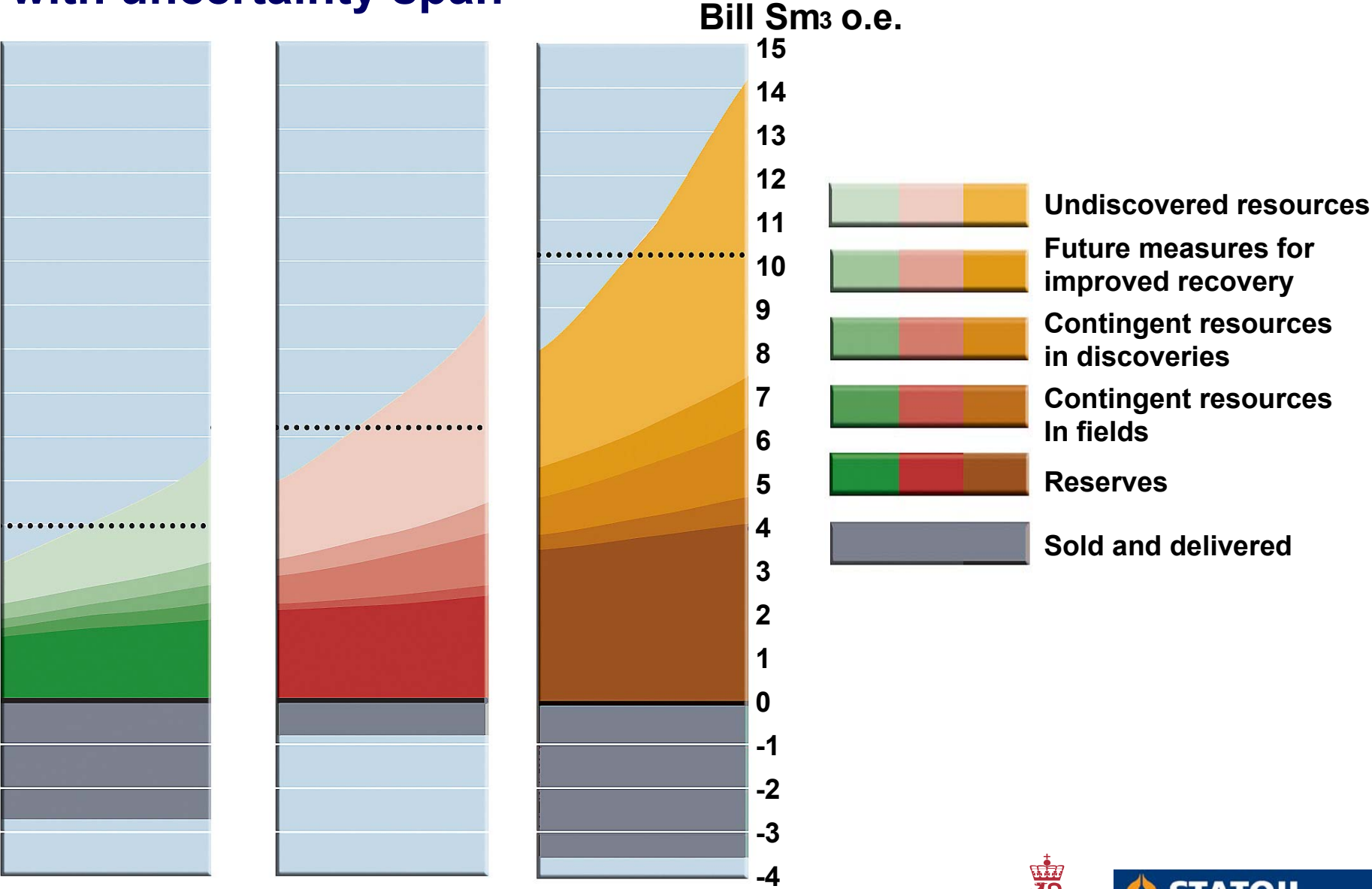


Fig. 5g 42



The distribution of petroleum resources with uncertainty span

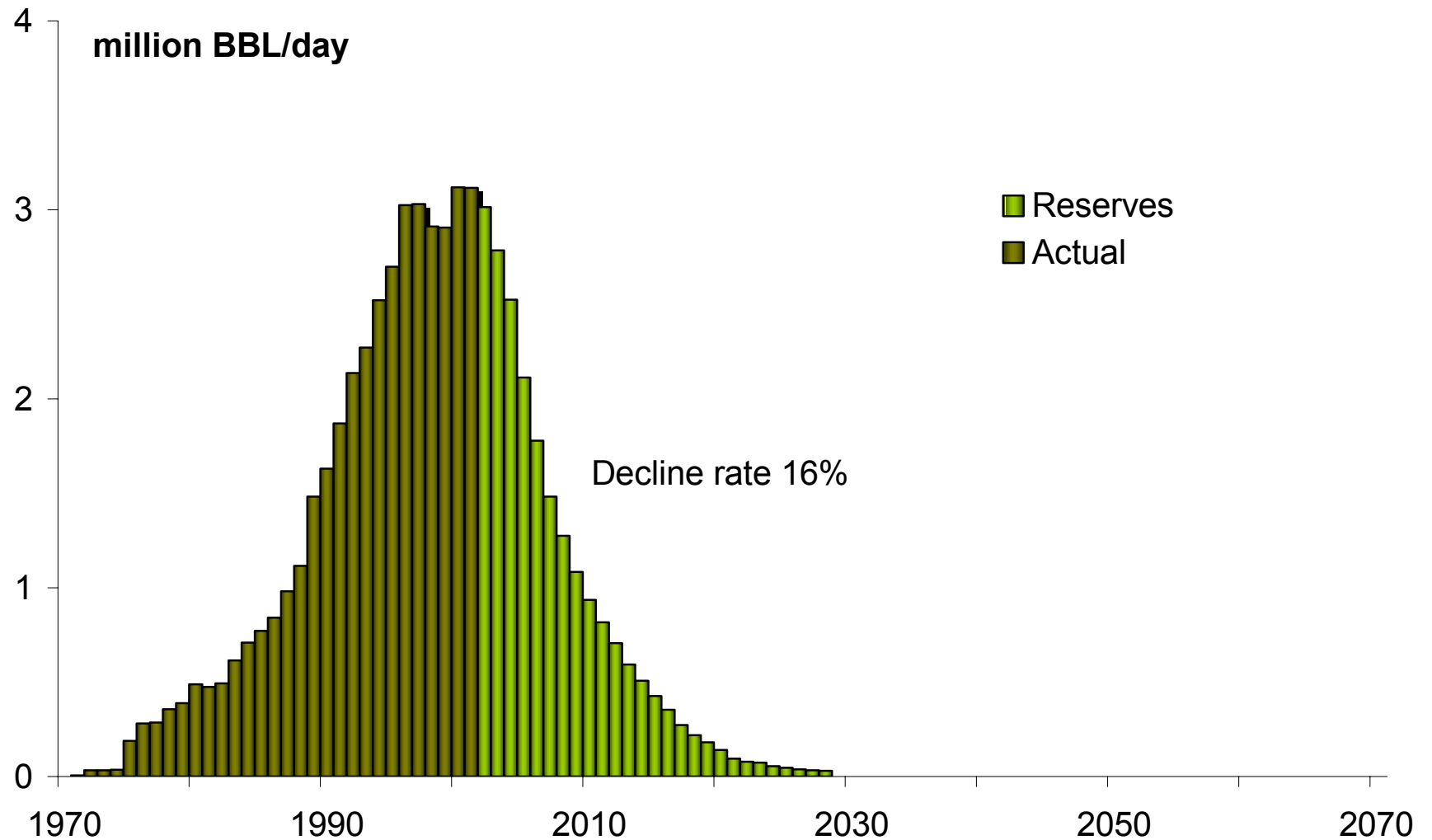


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E&P Value Chain Management

