Insights into Dialogue and Data in Gas Markets

Second IEA-IEF-OPEC Symposium
on Gas and Coal Market Outlooks

Paris | 30 October 2014

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International Energy Forum

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Tracking the Energy Dialogue on Natural Gas: Key Observations, Questions and Insights from October 2012

October 2012

1) **Asia Pacific** will drive future **natural gas demand**.
2) An **integrated global gas market** is not likely in the near term.
3) The logic for establishing **a regional gas-pricing hub in Asia** is questionable.
4) **Oil-indexation of gas prices** has clear merits, but some sellers have won business by applying a more flexible formula.
5) It is **difficult to talk about gas in isolation** because of its links to electricity, coal and renewables.
6) **Destination clauses in LNG contracts** are ironclad and non-negotiable.
7) There **are conflicting messages about gas in the marketplace** (clean fuel versus fracking concerns).
8) Companies entering **into joint ventures with US-based unconventionals players** will benefit from technology transfer, accelerating the spread of the unconventionals revolution.
9) In the wake of the **Fukushima disaster**, **Japan will cease using nuclear power** indefinitely.

Facilitating dialogue on gas at the Third IEF-IGU Ministerial Gas Forum | November 2012

<u>Selected Key Insights</u>

- **Markets remain interdependent despite the recent 're-regionalisation' of gas markets.** Coal to gas switching in the US engendered gas to coal switching in the EU.
- **Long-term contracts** help ensure security of supply and demand, but there may be room for **contracts to reflect more short- to long-term market signals.**

Facilitating dialogue on gas at the IEF Roundtable on Unconventionals | January 2013

Selected Key Insights

- When analysing the potential of US unconventionals production at the **national level**, one must remember to focus on the unique aspects of **each individual state**.
- Only in America? If so many nations have been able to develop **conventional oil and gas**, is it so implausible to think that they will eventually target **unconventonals?**

Facilitating dialogue on gas at the Fifth Asian Ministerial Energy Roundtable | November 2012

<u>Selected Key Insights</u>

- Future **gas demand levels for transportation,** notably in China and India, remain a "known unknown"**, or a identified variable that warrants close monitoring and more analysis.**

- Regional **gas prices may converge** as a function of **future trade volumes and policies.**

Facilitating dialogue on gas at an IEF-Gastech Roundtable on Unconventional Gas | March 2014

Selected Key Insights

- By some accounts, **destination clauses are already becoming a thing of the past**. New LNG contracts between Middle Eastern suppliers and Asia buyers appear **to incorporate more flexibility**.

- Recent requests from some Asian LNG importers to renegotiate the terms of their contracts **signal a need for more dialogue between buyers and sellers**. Through dialogue, both sides may well increase the upside to each deal.

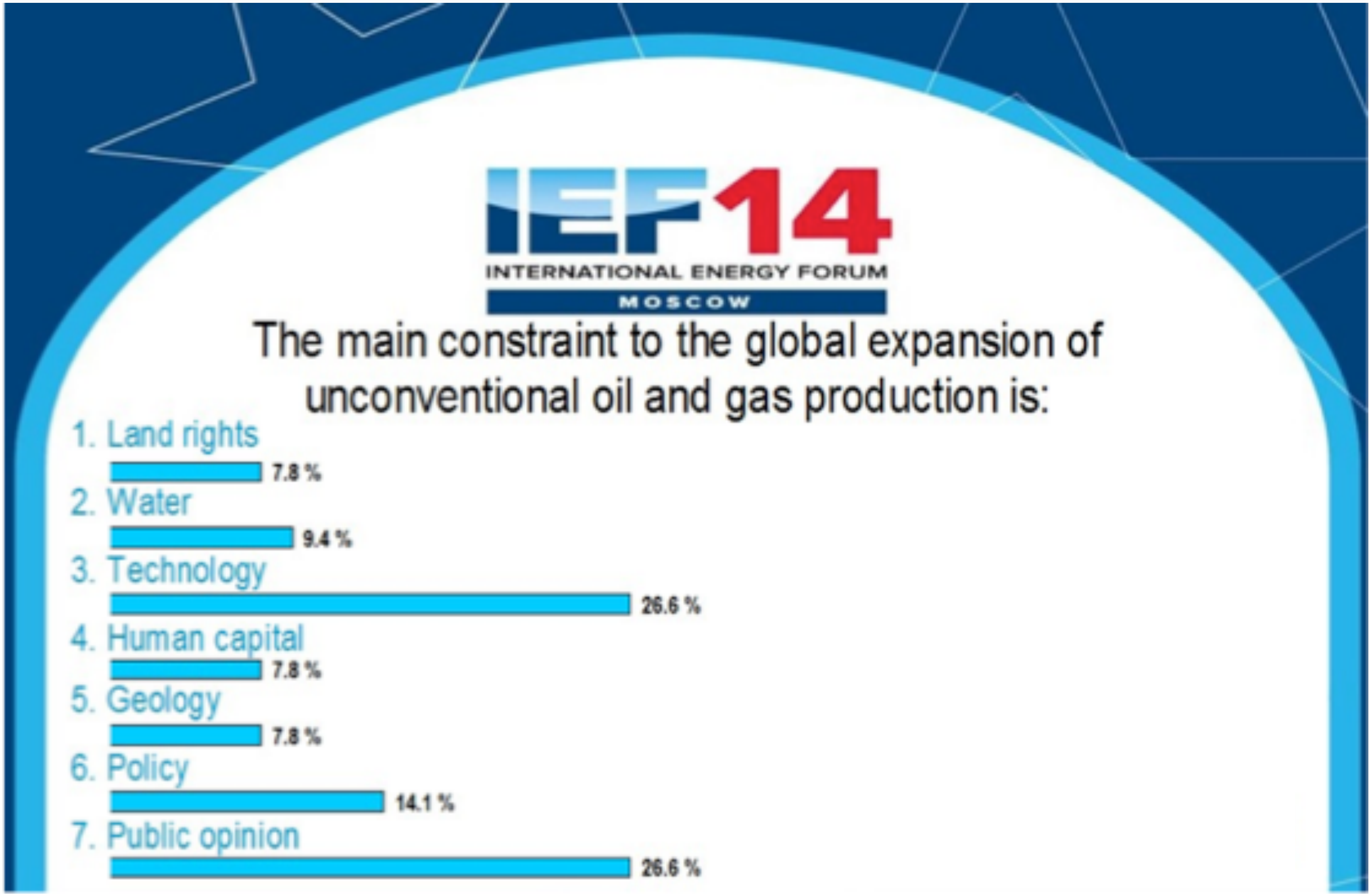
Facilitating dialogue on gas at the 14th IEF Ministerial May 2014

Selected Key Insights

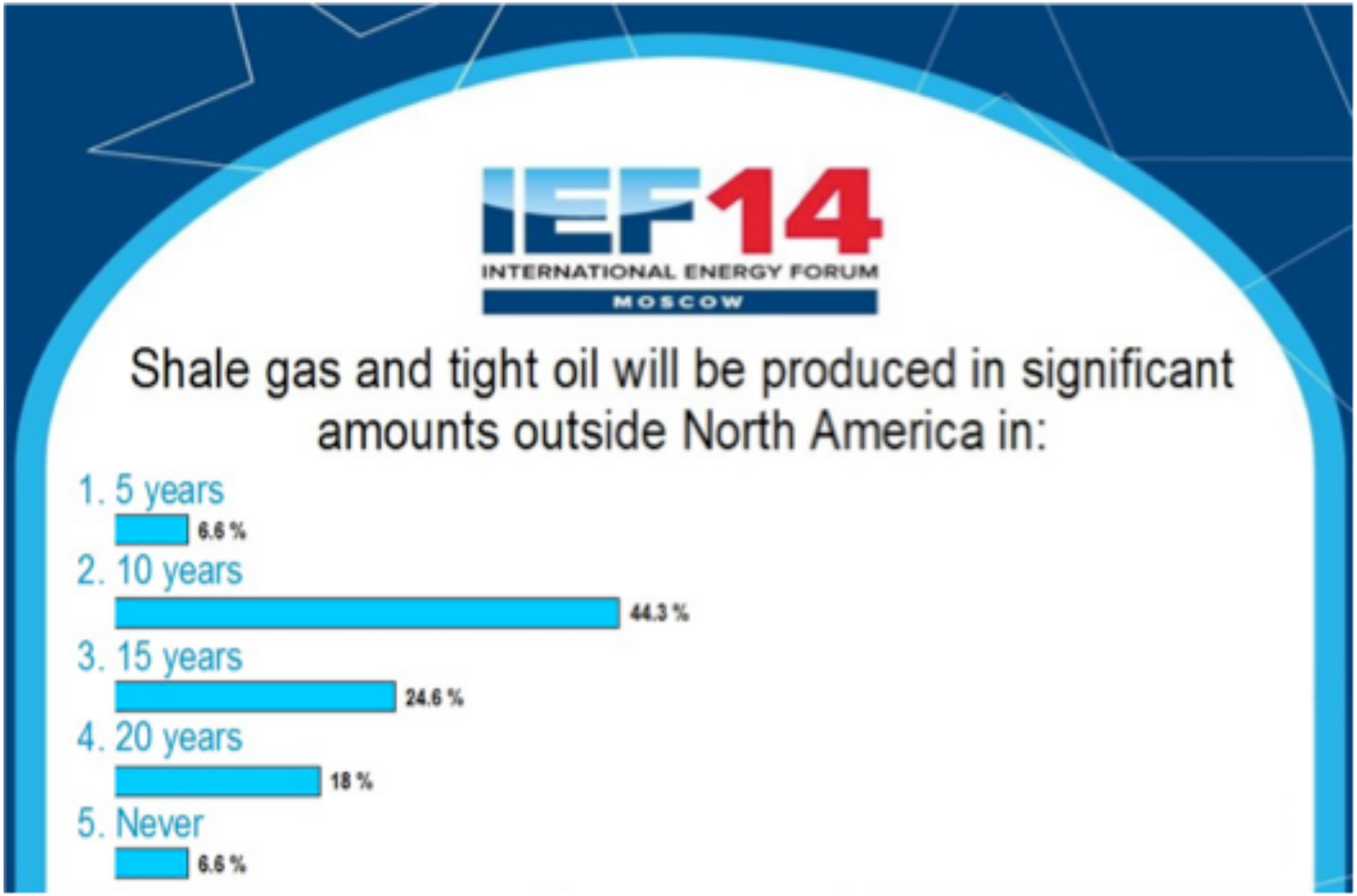
- **Controversy around unconventional gas persists**, and requires additional dialogue among various stakeholders.
- We need **to keep inventing and developing technology** before we can say that the unconventionals story can change the world.

Results of the IEF14 Interactive Survey…

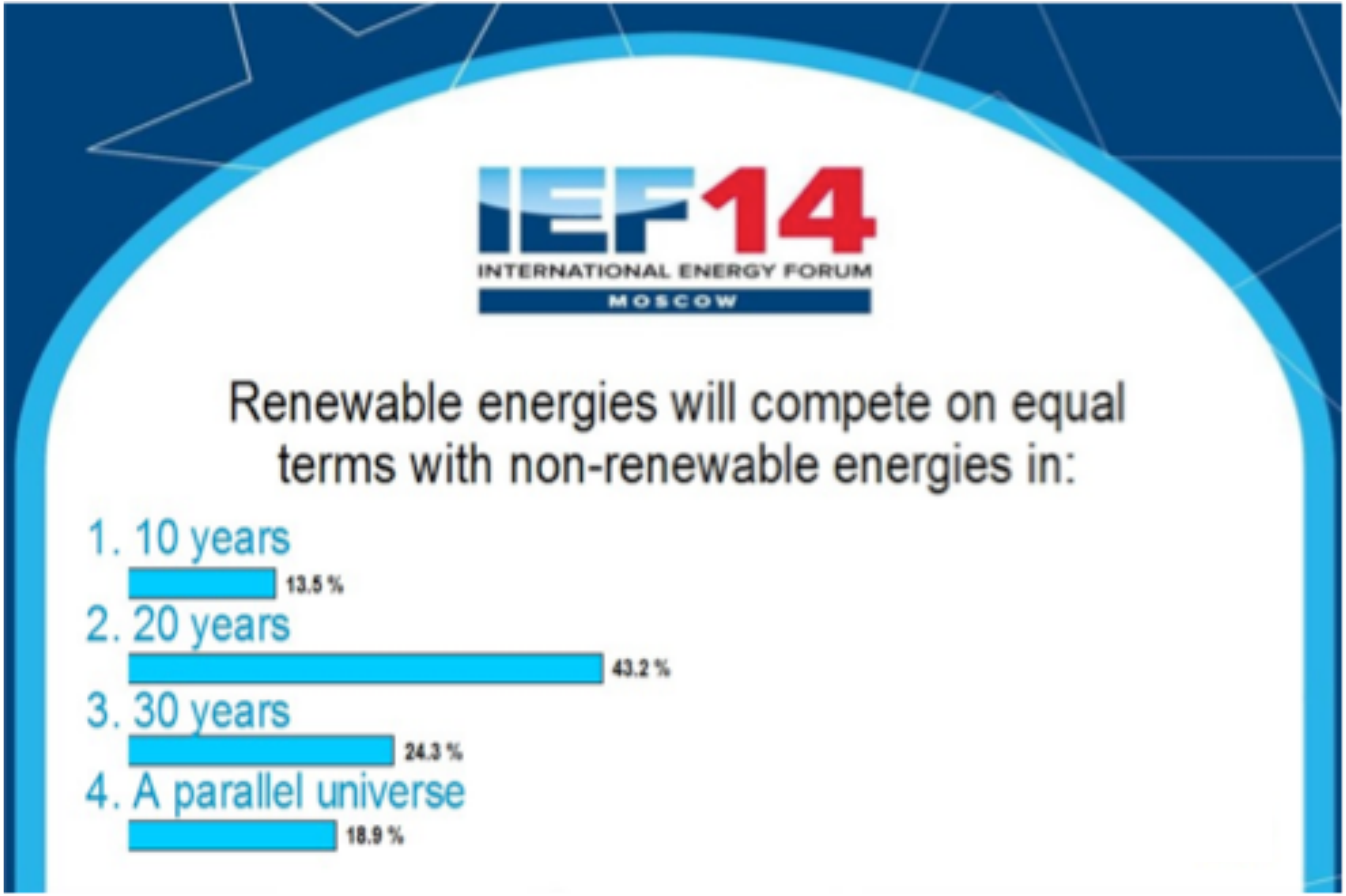
Facilitating dialogue on gas at the 14th IEF Ministerial May 2014



Facilitating dialogue on gas at the 14th IEF Ministerial May 2014



Facilitating dialogue on gas at the 14th IEF Ministerial May 2014



Facilitating dialogue on gas at an IEF-KEEI Thought Leaders Roundtable on The Rise of Unconventional Gas | June 2014

Selected Key Insights

- **Concerns of an LNG supply glut appear exaggerated**, given the fact that virtually all of the new LNG coming on stream has already been purchased.
- Rather than focusing on concerns of over supply, **it may well be more likely that there will not be enough supply** to meet the expected rise in LNG demand from China, Japan and Korea.

Facilitating dialogue on gas: Upcoming Events

First-ever G20-IEF Gas Dialogue
11 November | Acapulco, Mexico

Fourth IEF-IGU Ministerial Gas Forum
11-12 November | Acapulco, Mexico

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Then and Now: What Has Changed in the Global Energy Dialogue on Natural Gas?

October 2012	October 2014
1) Asia Pacific will drive future **natural gas demand**. 2) An **integrated global gas market** is not likely in the near term. 3) The logic for establishing **a regional gas-pricing hub in Asia** is questionable. **4) Oil-indexation of gas prices** has clear merits, but some sellers have won business by applying a more flexible formula. 5) It is **difficult to talk about gas in isolation** because of its links to electricity, coal and renewables.	**1) Unchanged.** **2) Unchanged**, though talk has begun of a possible LNG spot price. **3) Unchanged**, though several countries continue to push for this. **4) Unchanged**, with the trend towards greater flexibility on the part of LNG exporters. **5) Unchanged**, though gas is more a complement than a competitor.
6) Destination clauses in LNG contracts are ironclad and non-negotiable. 7) There **are conflicting messages about gas in the marketplace** (clean fuel versus fracking concerns). 8) Companies entering **into joint ventures with US-based unconventionals players** will benefit from technology transfer, accelerating the spread of the unconventionals revolution. 9) In the wake of the Fukushima disaster, **Japan will cease using nuclear power** indefinitely.	**6) Changed**: European Commission ruling, greater exporter flexibility. **7) Changed**: gas has gained prominence as a clean fossil fuel. **8) Changed**: geology is so different from play to play within the US that the transfer of knowledge to China and beyond is not so straightforward. **9) Changed**: Japan likely to bring some nuclear back on line in 2015.

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Progress on JODI-Gas as of October 2012

- JODI-Gas was an exercise, not a permanent initiative.
- 55 countries/economies were submitting data on an irregular basis.
- Two Gas Data Transparency Conferences had been organised, gathering key stakeholders and discuss challenges to enhanced data transparency and related countermeasures.

Shared Progress on JODI-Gas since October 2012

JodiGas™

Joint Organisations Data Initiative

▪ JODI-Gas became a **permanent initiative**	October 2012
• **68 countries/economies** participating in JODI-Gas	January 2013
• **Access to the JODI-Gas database granted** for participating countries	January 2013
• **JODI-Gas Regional Training Workshop** for Asia-Pacific Region	October 2013
• **JODI-Gas Regional Training Workshop** Central Asia & MENA	February 2014
• The **Gas Exporting Countries Forum (GECF)** became the 8th JODI Partner	March 2014
• **JODI-Gas Manual** prepared and published	April 2014
• **Public launch** of the JODI-Gas database at the IEF14	May 2014
• **New JODI website** unveiled	May 2014
• **77 countries/economies** participating in JODI-Gas	October 2014
• Continue to enhance the JODI-Gas database and increase participation	On-Going