GCube
Renewable Energy Insurance

Understanding Key Risks In Offshore Wind

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AIMU 2020

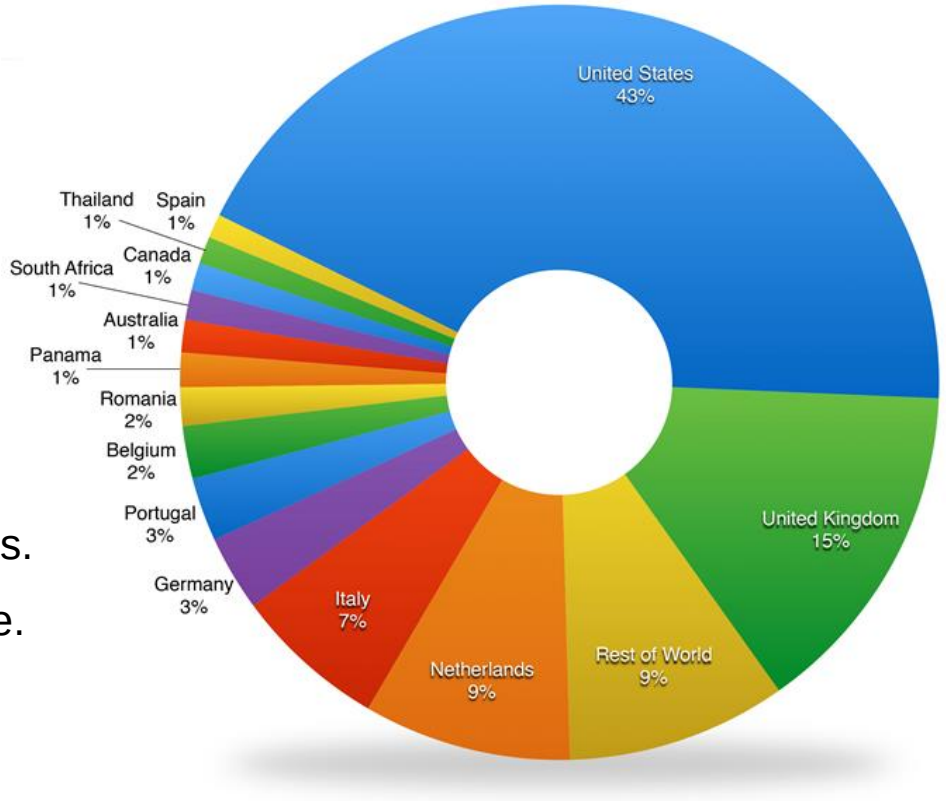
Agenda

1. Intro to GCube
2. Intro to Offshore Wind
   a. Background
   b. Evolution of Industry
   c. Offshore infrastructure
3. Key Risks & Loss examples
   a. Loss Expectancy
   b. Claims Examples
4. Risk from new tech & emerging markets
   a. US & Asia
   b. New technology

GCube: Overview

- ✓ World's leading renewable energy insurer.
- ✓ 25+ years' experience.
- ✓ 80GW of renewable energy projects insured in 60+ countries.
- ✓ 'A+' rated security and lender/finance accepted.
- ✓ USD 300m underwriting capacity any one project – 100% line.
- ✓ Commitment to collaboration with our clients.
- ✓ 50+ years combined loss control experience.
- ✓ 2400+ / USD500m+ paid claims.
- ✓ Regular client meetings, discussions and workshops.

Geographic Spread



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Offshore Expertise

- ✓ 70+ Offshore Wind Projects c. 11 GW
- ✓ USD 50m+ paid claims.
- ✓ Underwritten offshore risks in over 20 countries across three continents
- ✓ Dedicated offshore wind team
- ✓ Recognised leader in floating wind insurance
- ✓ Leader in Floating Offshore Wind
- ✓ Biennial Risk Manager Seminar
- ✓ Vocal contributor to industry initiatives

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Introduction to Offshore Wind

Vindeby Offshore Wind Farm (Photo: Danish Wind Industry Association)

Coastal Virginia Offshore Wind (Photo: Dominion)

Introduction to Offshore Wind

Introduction to Offshore Wind

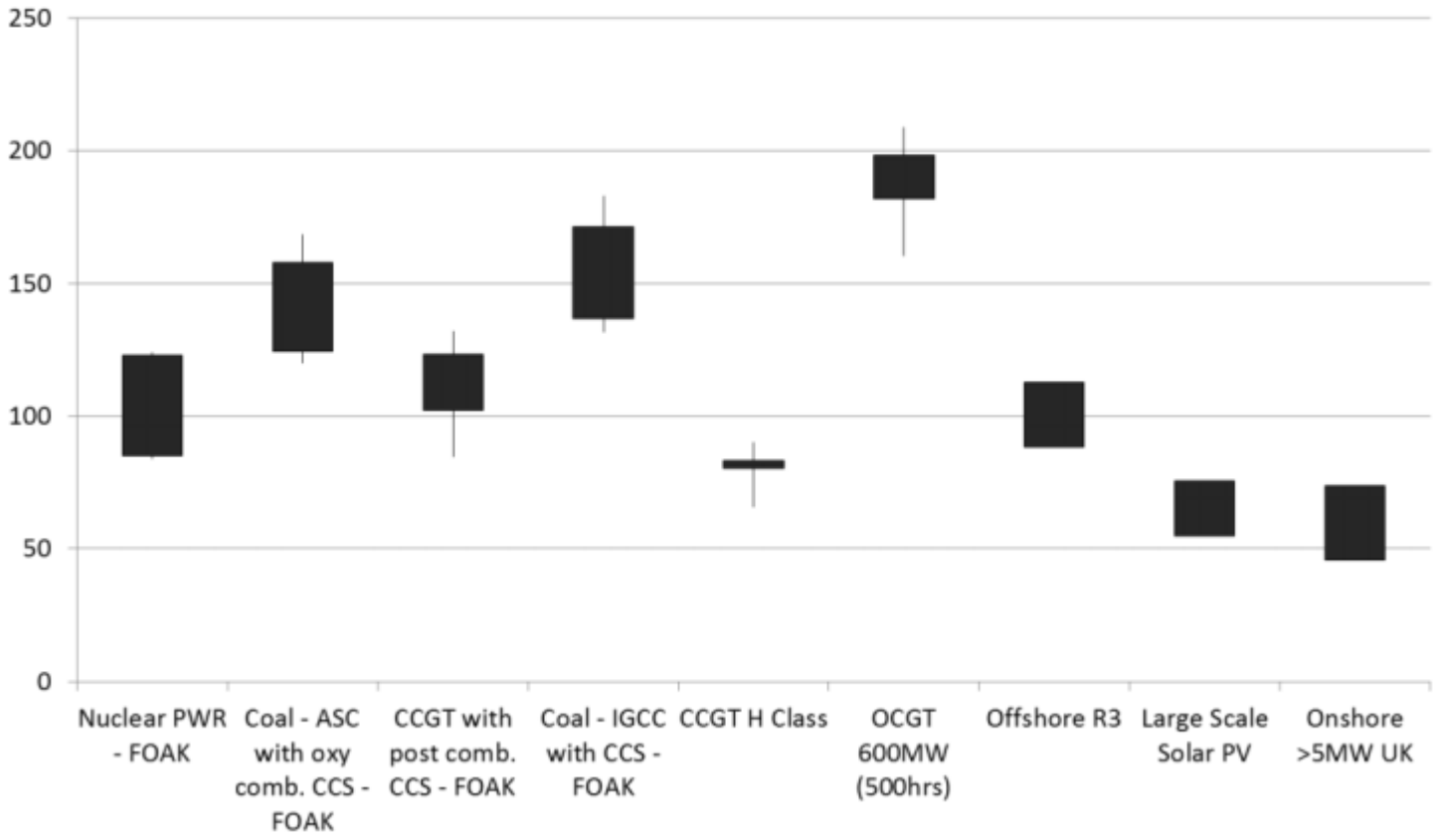
Poll Question:

How competitive is new offshore wind per MWH in the US?

Options:

A – USD 52.00 per MWH
B – USD 65.00 per MWh
C – USD 235.75 per MWh

Introduction to Offshore Wind



Source: BEIS Projections

https://www.thecrownestate.co.uk/en-gb/our-places/asset-map/#tab-2

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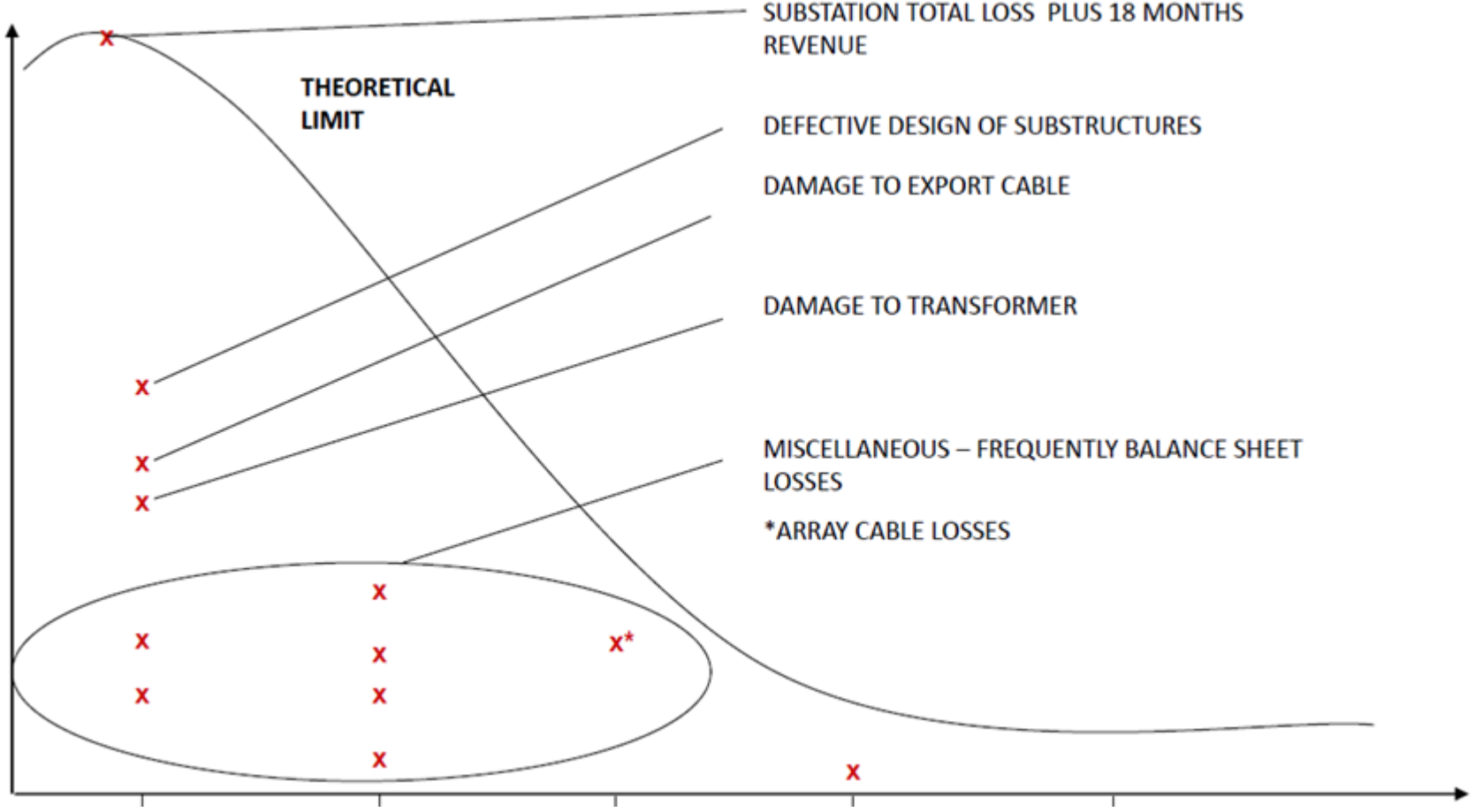
Loss Expectancy



(Illustrative purposes only)

Claims: Foundations

Shim plate has fallen off, caught between inside of hammer and top of MP flange. This causes a depression in the flange that is not easily repairable – leads to multi-million € claim…

Claims: Foundations

Operational Claims: Export Cable

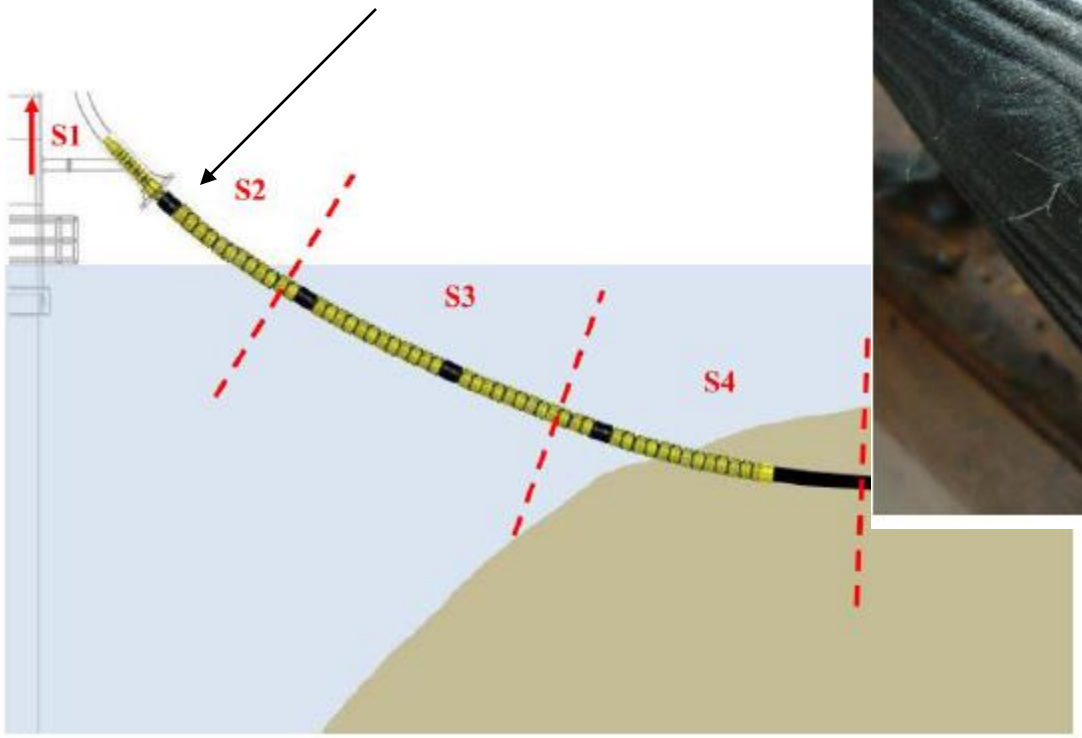
Operational Export Cable Claims: Root Cause?

- RCA results:
  - Exterior of cable (armouring, insulating electrical tape, etc.) fine
  - fibre optic core (FOC) disintegrated
  - Hole found in lead sheath of power core 3

Above likely damaged FOC semi-conducting sheath → sea water ingress → corrosion of aluminium armouring under sheath + standing voltage on FOC → degradation of insulation → BANG

Inter-array Cables – Inter-tidal Projects

Part of inter-array cable exposed, out of the water. Wave action over prolonged period damaged the cable



Operational Claims: Transformer/Substation loss

US Challenges: Jones Act

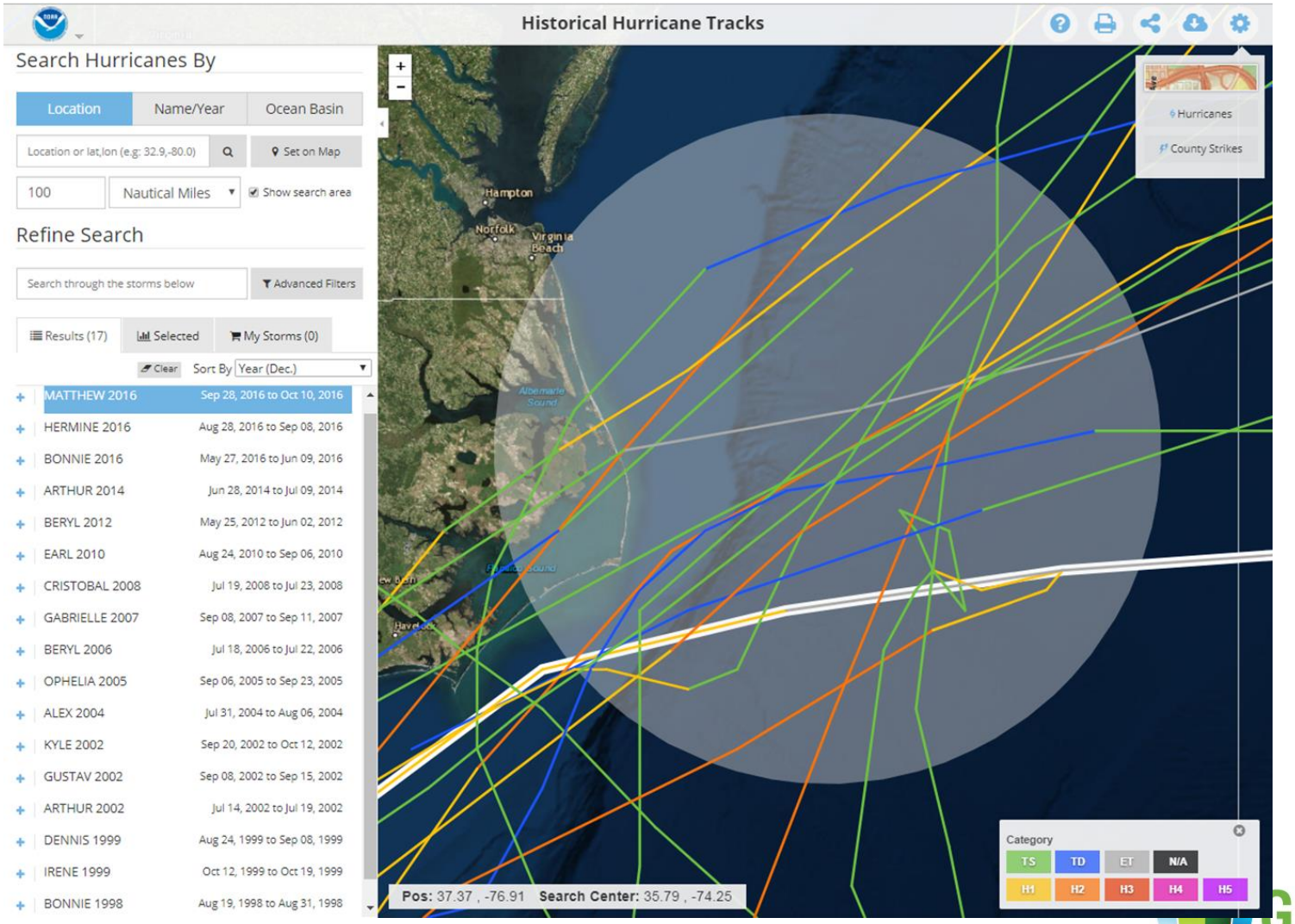
- Goods travelling between any two US ports need to be transported on ships built, owned and operated by US citizens or permanent residents

- Once a foundation is installed in US waters it becomes a US port meaning this will apply to US offshore wind installation – no US installation vessels / crew currently

- Can either use a non-US port as a base (e.g. Canada) or use a ‘feeder-barge’ solution – both more expensive & increases risk

- Act presents large, but not insurmountable challenges

US Challenges - Windstorm



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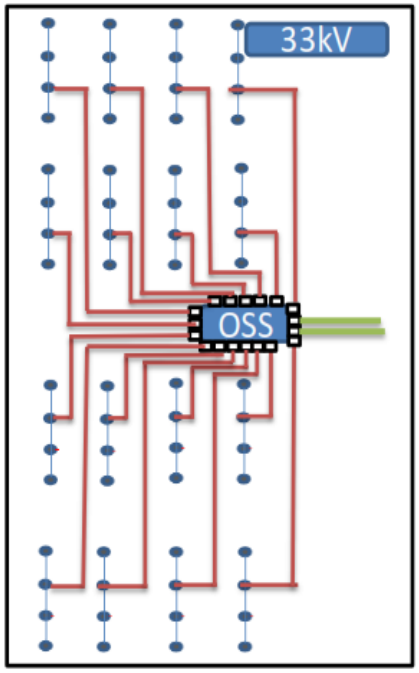
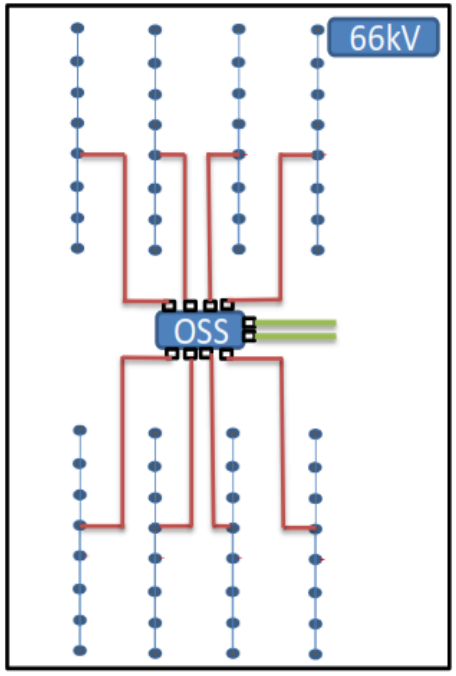
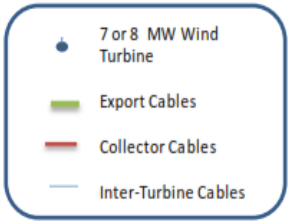
New Technology







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Thank You

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