Nature-Inspired Technology

Transforming Gentle Winds Into **Power Giants**



ParsonsKinetics.com



The Challenge

How to generate <u>cheap</u> renewable energy, in regions with lower wind speeds, where traditional turbines *and* solar panels are impractical?

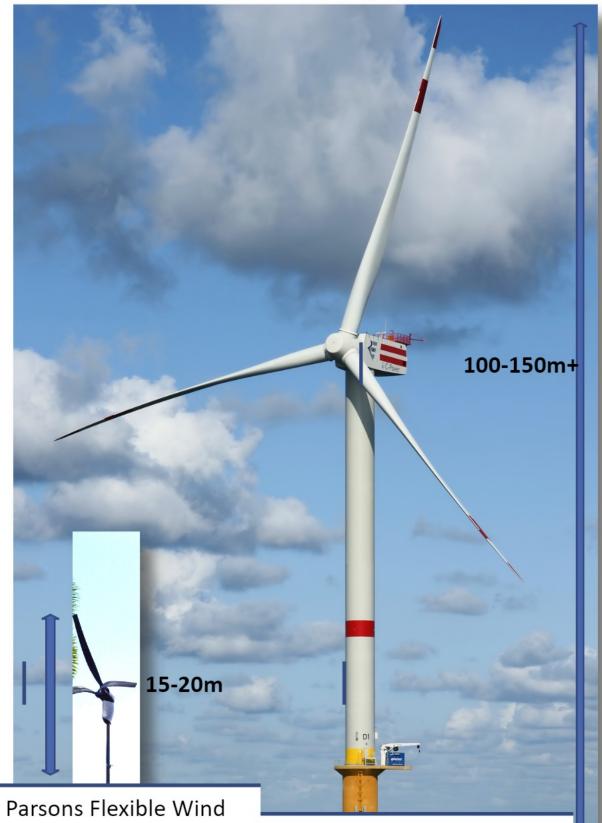




Why not just use big traditional wind turbines?

- **1.** Necessity of very remote locations
- 2. Requires High wind-**speeds to be cost** effective
- 3. Years of planning AND community agreements
 4. exclusive niche of very large investments
 (a <u>2 MW turbine costs between \$3 and \$5 million to install!)</u>
- 5. High Noise and enviromental impact







Turbine

Traditional Wind Turbine

The Opportunity-**Unlocking the Potential of**

the underdeveloped Low Wind Speed market

1. Potential Global Market Size is enormous

2. New patented technology achieves Highest Energy Efficiency

3. Sustainable production materials used (recycled plastics, iron magnets and carbon fiber blades)

4. Highly scalable energy solution suitable for large AND small urban projects



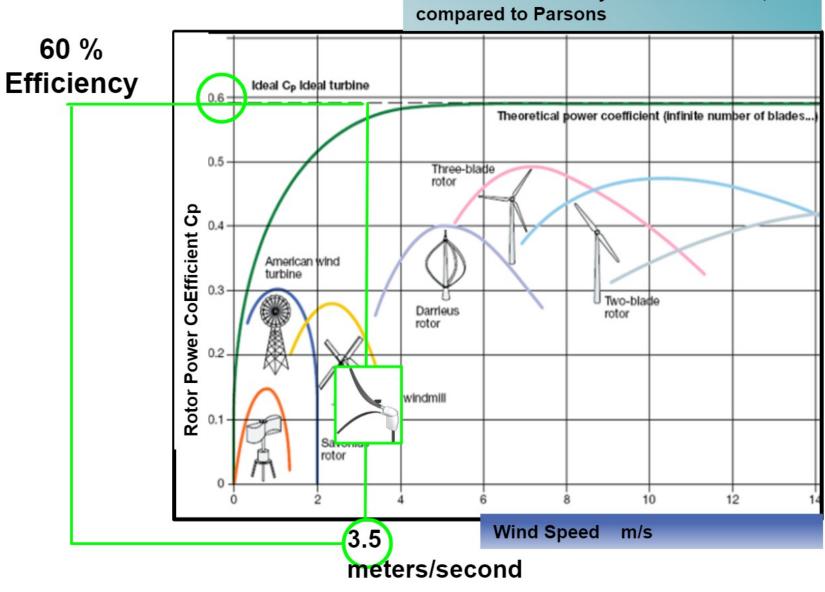


THE SOLUTION- The Bio-Seed Wind Turbine

The refined patented blade shape, inspired by lift-spinning seeds, maximizes energy generated in calmer winds

These areas constitute ~20% of landscapes, previously unsuitable for wind farms

7,5 KWh @ 10000 USD to produce each unit!



Patented Protection in USA, Europe, China and & Colombia (WO2014/009934 A2) Source: Published peer reviewed paper in Journal: Composite

Structures: https://www.sciencedirect.com/science/article/abs/pii/S0263822318302460?via%3Dihub

Close to the ideal coefficient (60%) of efficiency for wind turbines at only 3.5 m/s wind speed



Theoretical Efficiency of other turbines,



Join us and Invest Where innovation meets sustainability

Lets revolutionize the wind energy market by:

Local investment agreements

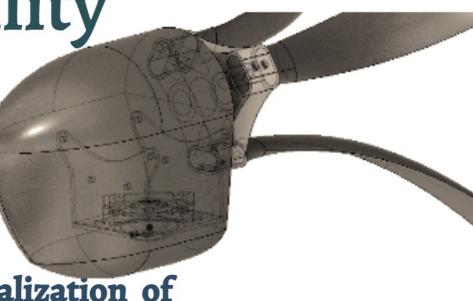
> Evolving design using sustainable materials and improved tech

(MOU's in place with several Technical Universities)

In plant construction plans for the manufacturing of wind turbine and realization of pilot wind farms

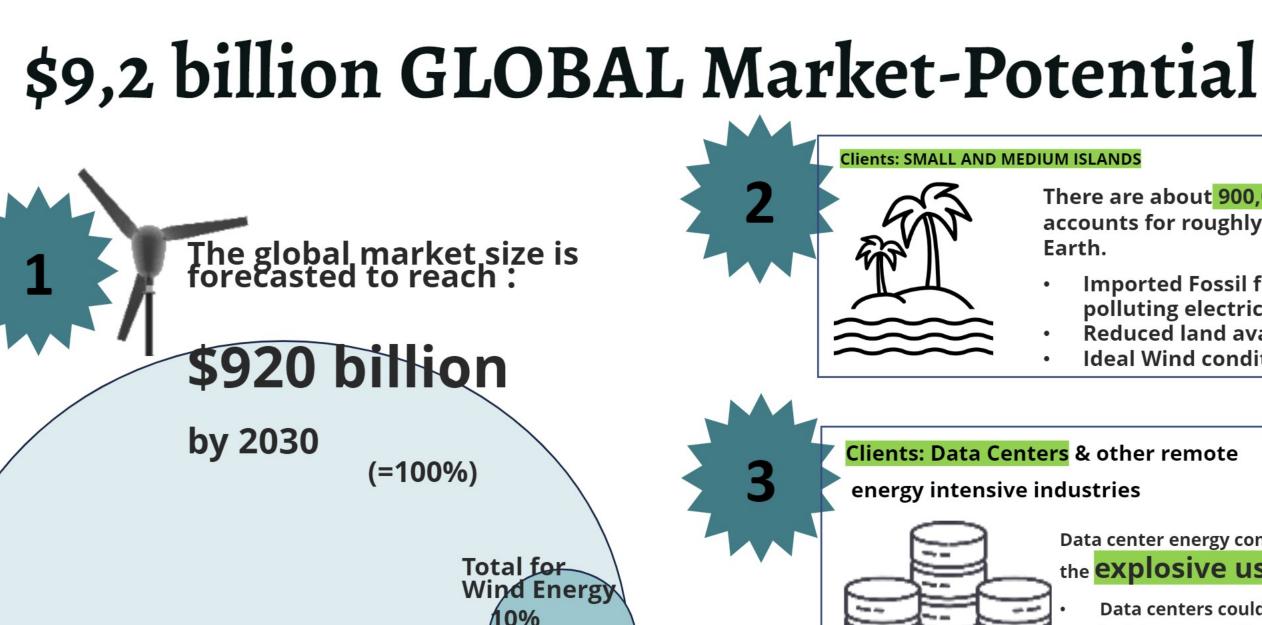






Emissions Reduction by 2050:

30 TONS of CO2/year per single 7.5 kW BioSeed turbine



1% population of 125 million (source New Scientist) Often remotely located high energy consuming industries (i.e. Oil and gas, mining, ports etc) often require quick fix Parsons BioSeed wind turbines, target the 1% of the for their CO2 emission chain

Serviceable Obtainable Market ~ \$9,2/billion

distributed energy demand



There are about 900,000 official islands in the world and accounts for roughly 1/15th of the total land area of

Imported Fossil fuels are expensive and the main polluting electricity source **Reduced land availability** Ideal Wind conditions

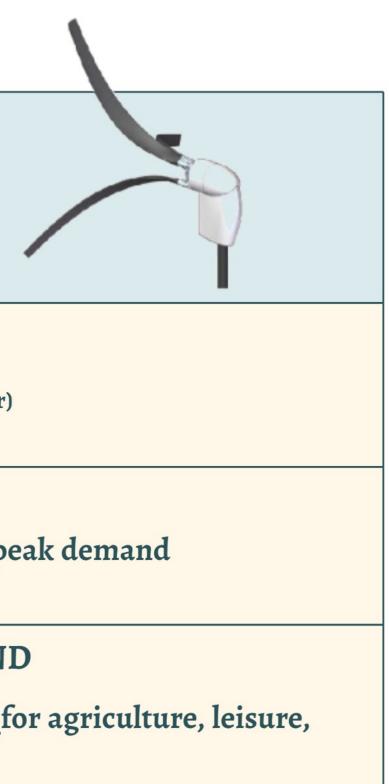
Data center energy consumption is expected to increase due to the **explosive use of Al** and green energy demand

Data centers could double their electricity consumption in just two years. That means they would devour as much energy in 2026 as the entire nation of Japan, with a

Solar PV as the main competitorsimilar cost of energy per MW

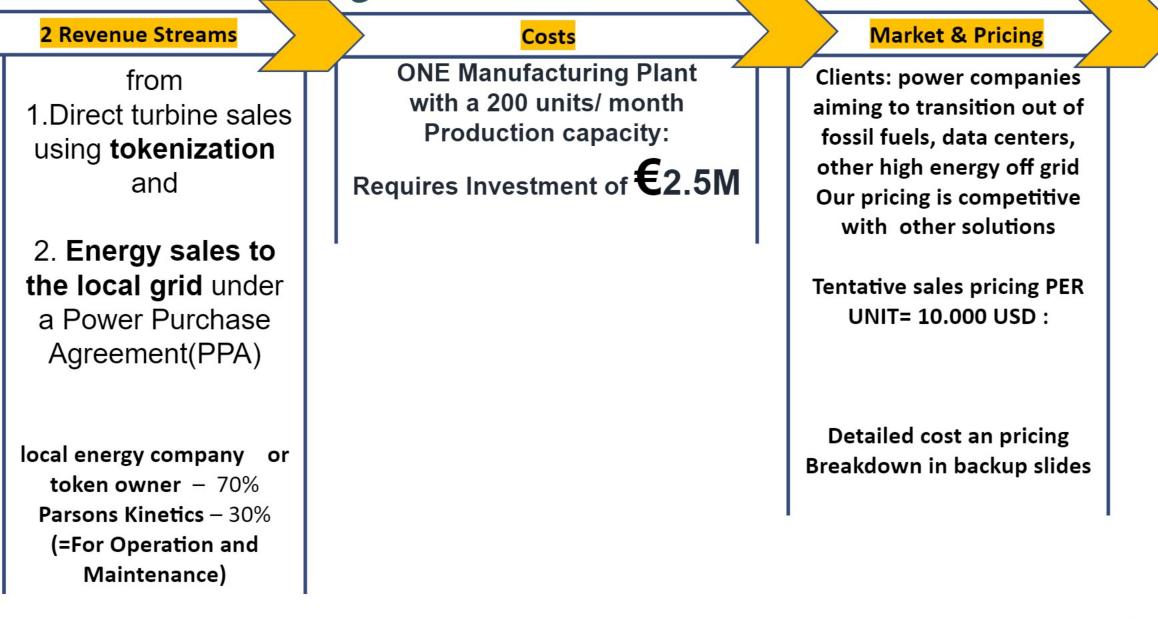
	Table 1. Comparing Solar PV vs	BioSeed	
	Property	Solar PV	Parsons BioSeed Turbine
Levelized Cost of Energy		\$24 to \$96 /MWh	~\$52/MWh (is in the same range as Solar)
	- Energy delivery -during peak demand (~6 to 8 pm)	-~Between 6 am and 6 pm - <mark>none during</mark> peak demand	-At least 16 houres per day - <mark>also</mark> during evening pe
	Land Utilization	3 Ha per Mw and land remains UNUSABLE	^{16 Ha per} USABLE LAN Lands <u>remains usable</u> for housing





The **2** Business ModelS and revenue streams:

1. B2B under a PowerPurchaseAgreement and 2. B2C through direct sales of turbines through Tokenization



Success will be measured by units sold, the percentage of market penetration, cost reductions achieved through scale, and the long-term sustainability of our energy production



Scalability

up to

35 GW

Pilot Wind Farm Locations negotiations in the Dutch Caribbean, Japan, Latin America, US, Europe etc

The modular design of our turbines allows for scalability across diverse settings, from small community projects to large commercial farms. Future innovations will target efficiency improvements and cost reductions



First large scale Pilot Project-Carribean Dreams turned reality

- Curaçao sets as objective achieving 65 MW of wind electricity production by 2025
- MOU available from the government, resulting from BD visit in person by the Parsons Team in January 2024, which cover:
 - Factory and maintenance training using local personnel
 - Technical Agreement with Aqualectra National Energy Company
- Pilot project showcases the BioSeed turbines' potential and **Demonstrates HUB potential for the whole Caribbean Market**
- Curaçao Part of the EU and eligible for EU HORIZON grants and subsidies of up to ~50%
- Several ideal locations identified where traditional Wind turbines are not feasible (e.g. port, refinery, asphalt lake, remote leisure locations etc,etc)
- Technical cooperation between Universities of Curaçao and Bogota (TU Delft pending)

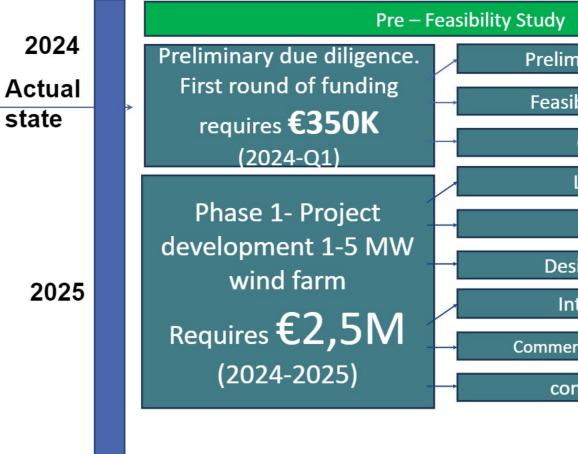




The Pilot Project in Curaçao Tentative Timeline and Objectives

Key Objectives:

- Increase renewable energy contribution to the island's grid
- Test and validate the performance under real-world conditions
- Demonstrate environmental and economic benefits
- making use of recycled materials and sustainable magnets in a local production process
- Make use of grants and use Free Zone tax advantages to demonstrate export potential



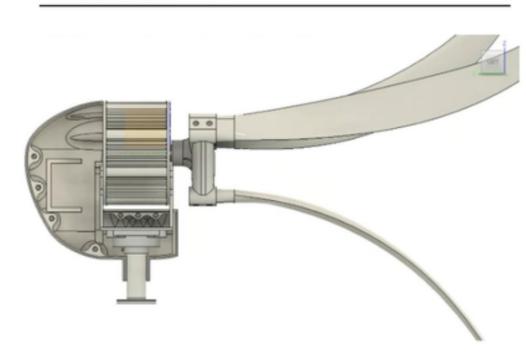
The project aims to produce up to **5 MW** of clean energy,

reducing CO₂ emissions by **40.000** tons annually, and setting a precedent for future renewable energy initiatives

Tentative Timeline Preliminary assessment Feasibility engineering **Onsite pilot** Land control Permitting **Design Engineering** Interconnection **Commercialization agreement** construction debt

Data Sheet – Bioseed 25K

Bioseed 25K - CF

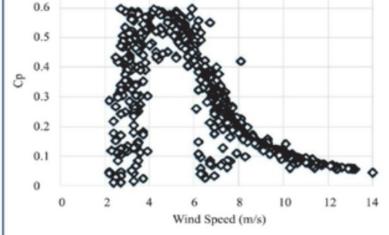


Product description

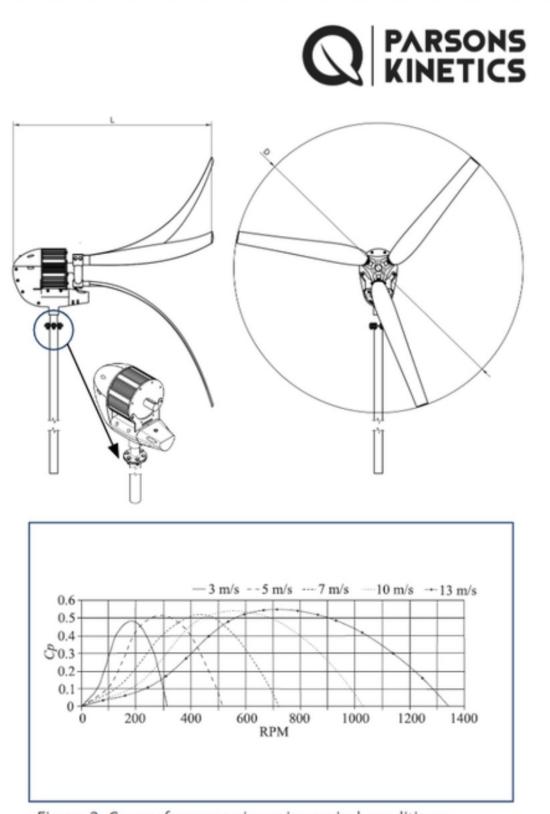
The 25 kW Bioseed turbine is the largest version of the bio inspired turbine series, very useful in distributed wind generation projects and compatible with solar parks.



Specifications	Bioseed 25k	-
Power generation Dimensions	25 kW – 3 phase 220v D: 16m L: 6,5cm Installation: 25 to 30 m weight: 580 kg	
Blades	3 x (10 m) Materials: CF: Carbon Fiber	Ŕ
Generador	25kW Permanent Magnet Generator	L. I'T
Monitoring	RPM, vibration, temperature, current, voltage, positioning, wind speed.	U







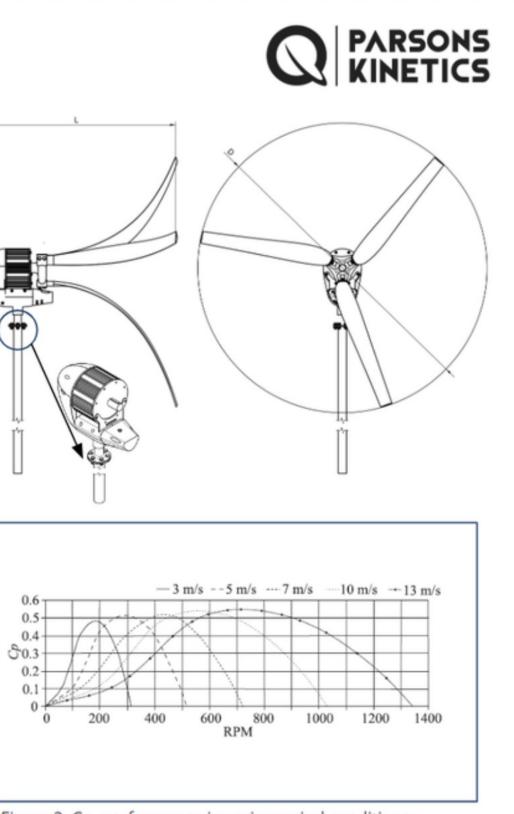
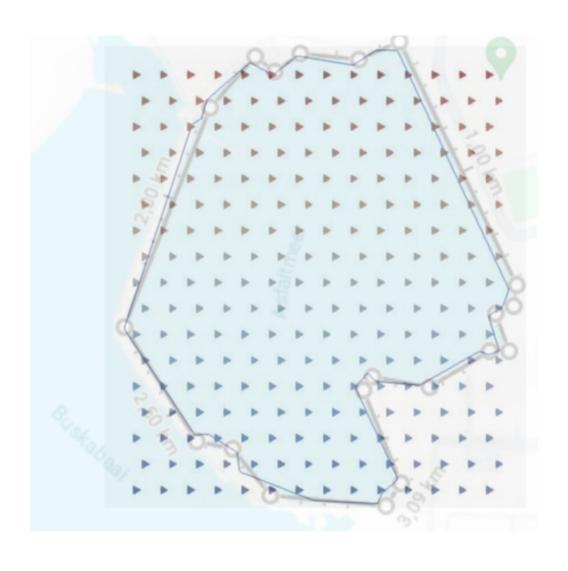


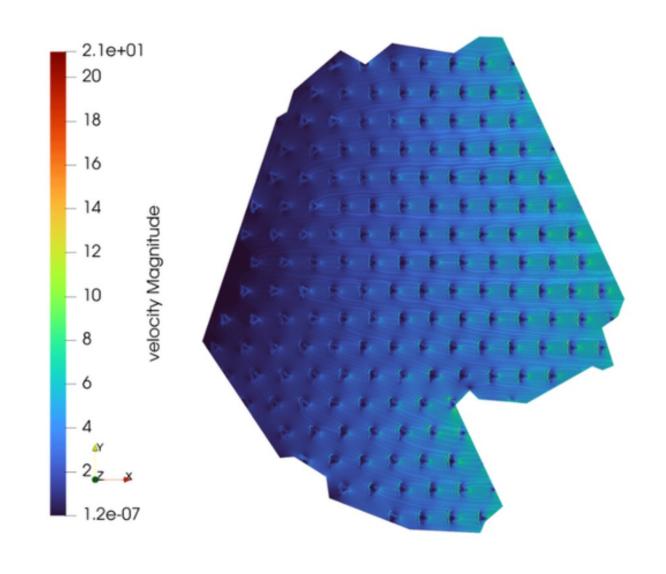


Figura 2. Cp. performance in various wind conditions

160 25KWh Bioseeds Park with Solar Panels

17 X 14 staggered distribution with 50m spacing 160 Bioseeds@25kwh inside the 58000 m2 landscape Approximately 200 W/m2 (6 m/s E-W) @ 30 m above sea level (3.2MW - 4MW) range with the 160 Bioseeds@25kwh





Join us in paving the way for a greener future

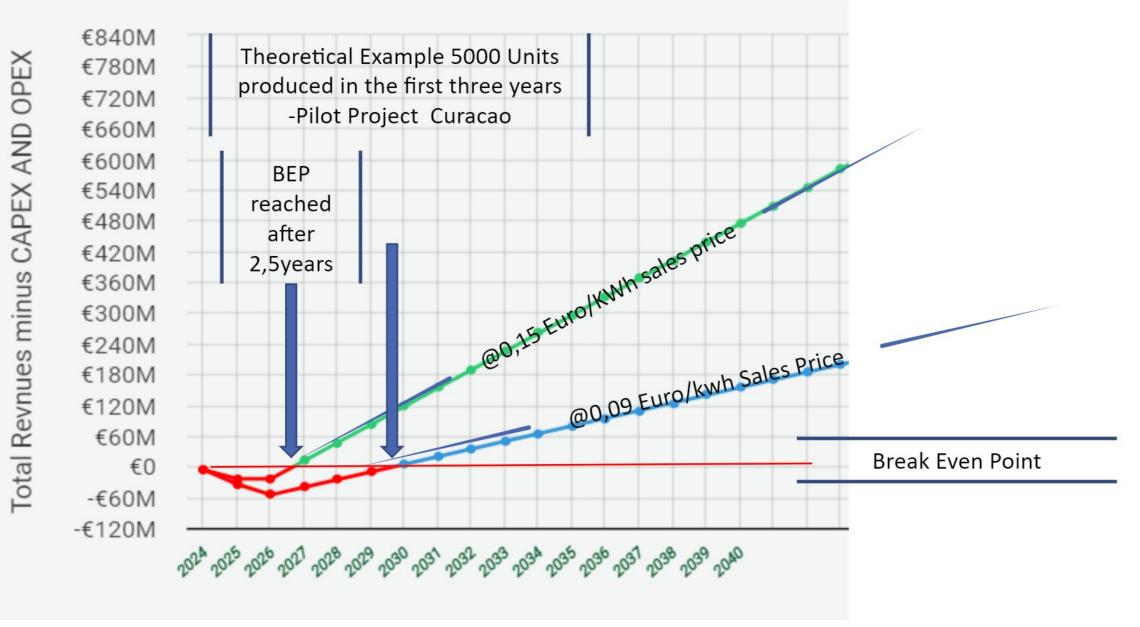




Financial projections Theoretical Scenario

Total Revenues minus Total Opex and Capex

Revenue -Total opex capex - Revenue -Total opex cap





Financial projections(II)

Need to finalize 10 year Forecast showing revenues/costs/profit, ROI according to pilot project scenarios

3 yrs route map.								
BP.2	MWh	kWh		T. Capacity		Investment T.		
Wind farms	65	65.000		65.000	kWh	€243.572.050		
	Nominal	Power @ 20m high						
Bioseed gen Power	7,5	6,50	kWh					
Bioseed REQ.	9.993	Units	416	month				
Wind Farms Business Un	it		Energy Product	ion & Sales		Wind farm O	рех	
kW intallation	65.000	kWh	kW sale price	€ 0,09	per kWh	Operation Opex	€ 0,0140	per kW
kW installation CAPEX	€ 3.747,26	per kW	Generation p90	31.200.000	kWh per Month	Maintenance Opex	€ 0,0081	per kW
T. Installatin CAPEX	€243.572.050		Energy sales income	€ 2.808.000,00	month	Land usage Opex	€ 0,0116	per kW
Montly income:	€ 2.808.000,00		Energy sales income	\$31.824.000	Yr	Energy transmision Opex	€ 0,0128	per kW
Montly Opex:	€ 1.451.162,7907					Total Opex per kW	€ 0,0465	Total Op
Montly profit:	€ 1.356.837,21							
Yearly profit:	€ 16.282.046,51							

<u>Source</u> <u>https://sheet.zohopublic.com/sheet/published/nx27jd17</u> Obf9eb4fa412b8ffa79adea0ace55



Electricity sale price and wind harvesting scenarios: High, mid and low cases (Curacao/Caribbean setting)

Variable	Optimistic Scenario (High sale Price & wind energy collected)	most likely scenario (current price & most likely wind conditions in area)	Worst case scenario (lowest price & worst wind conditions)
Target Sales Price per kWh	€ 0,12	€ 0,09	€ 0,08
Potency density (W/m2) (=how much wind energy do we collect per unit)	365	300	260
Radius of Turbine(m)	3,4 m	3,4 m	3,4 m
Turbine efficiency (%)	58%	58%	58%
Installation height (m)	20	20	20
Electricity generation per turbine v 1.0 (KWh)	7,69	6,32	5,48
Yearly hours of generation	6390	5440	4480
AVG hour per day with wind speed > 5m/s	18	16	14
AVG operational days per year	355	340	320
Yearly energy generation (kW)	49.128,15	34.376,12	24.535,11
Yearly energy sales per unit (Eur)	€ 5.895,38	€ 3.093,85	€ 1.962,81



Meet The Experts

Arrestored to the second secon

in

amilo Bayon

Renewable Energy expert AND mentor ClimateLaunchPad

Ex-Shell (15+ y experience in managing energy projects)

Dutch Based

Leader/Changemaker

ied

kalar

PHD Professor Mechanical Engineering

Expert in modeling of complex systems Several Scientific Publications Founder/Blade expert Apex Wind

Ex-Vestas Lead Specialist Wind Energy Innovation

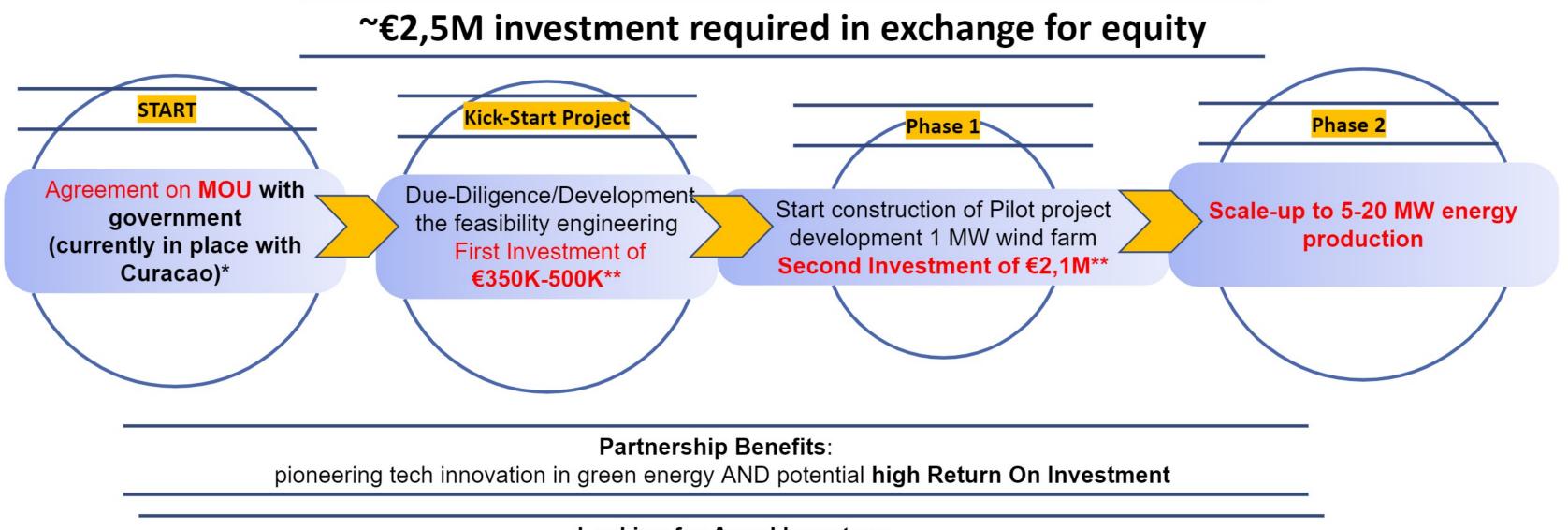
Click **here** for Video Introduction of the team Members



PHD Sustainable Development

> Houston/Bogota based

The ASK-Joining Forces for a Sustainable Future



Looking for Angel Investors

(e.g. VC's, individuals, corporate, private equity firms, etc)

Further details to join in this venture, click here

*using the Free Zone for manufacturing with strong institutional backing **in return for shares (pro-rata) of the newly generated local energy company



Closing, way forward and Q&A

Click <u>here</u> for 3D animation of bioseeds turbine in urban setting :

https://cloud.3dvista.com/hosting/7090288/8/index.htm?utm_medium=email&utm_source=govdeliver

У



3D Animation in Landscape

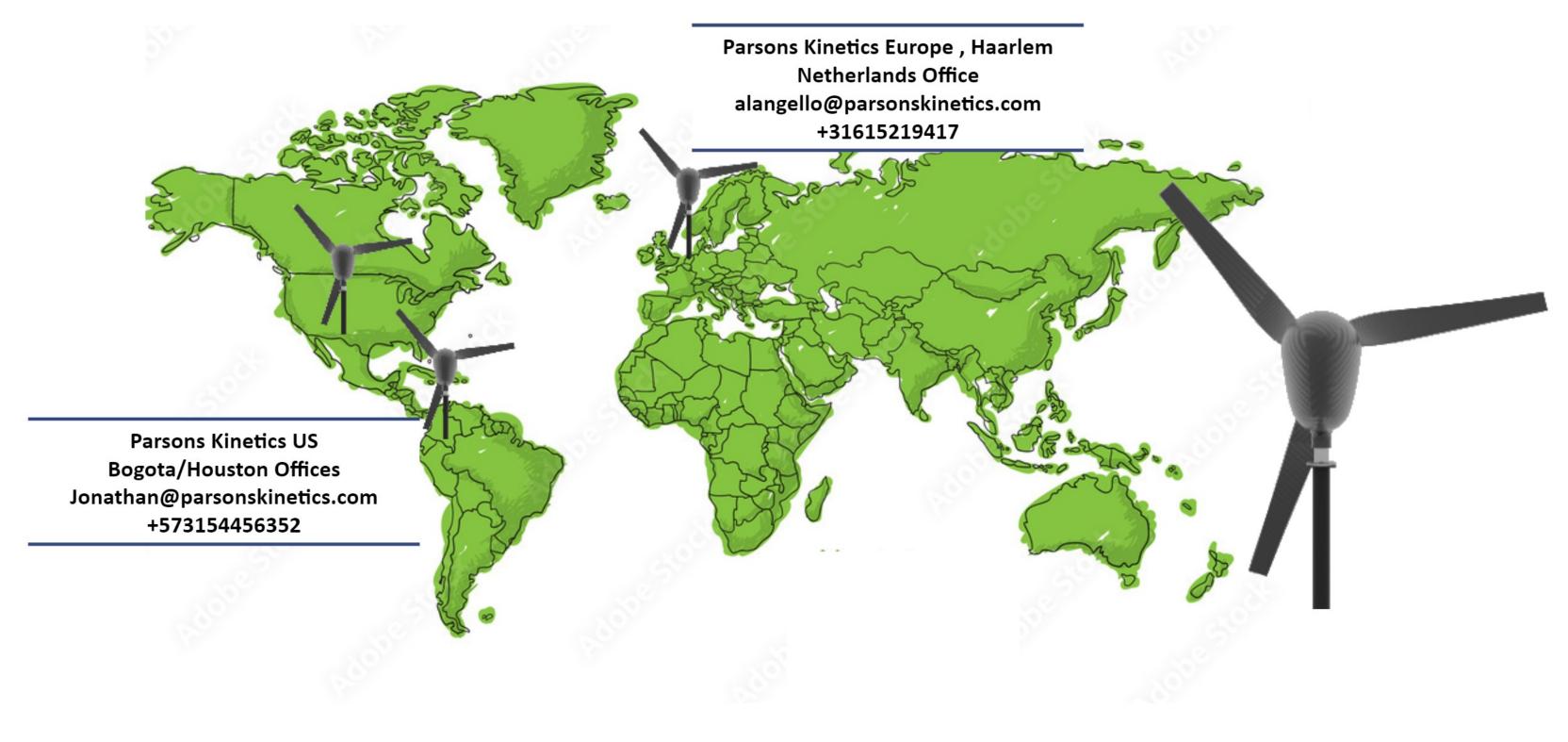


TOKENIZED WIND TURBINES





Backup Slides & Contact Info





Backup Slides

PARSONS KINETICS

Proyectos en curso



Samacá / Boyacá

Fase piloto

- ✓ Factibilidad
- ✓ Acuerdo tierras (400 Ha)
- ✓ Acuerdos comercialización
- ✓ Inio fase piloto
- o Inicio fase implementación



Tolú / Coveñas

Fase estudio de factibilidad

- ✓ Factibilidad
- ✓ Acuerdo tierras
- ✓ Acuerdos comercialización
- Inio fase piloto
- o Inicio fase implementación



Curacao / Lago de Asfalto Fase estudio de factibilidad

✓ Factibilidad
 ✓ Acuerdo tierras (85 Ha)
 ✓ Acuerdos comercialización
 ○ Inio fase piloto
 ○ Inicio fase implementación



MODELO DE NEGOCIO Parques eólicos compartidos

Tolú



Pov	ver	50 kW				
Mo	dels	Bioseed 1,5kW				
Inve	estment	US\$ 2.900 / kW				
% 0	occupancy	100%				
ച്ചി	Wind profile					
C/D	kW sale price	00000				
ž	CO2 mitigation	0000				
۶	Environment ris	k 00000				

Samacá



Pov	ver	12,5 MW				
Mo	dels	Bioseed 1,5 / 7,5 kW				
Inv	estment	US\$ 2.200 kW				
% (occupancy	8%				
್ಳಿ	Wind profile	00000				
며	kW sale price	0000				
ž	CO2 mitigation	0000				
۶	Environment risk	00000				

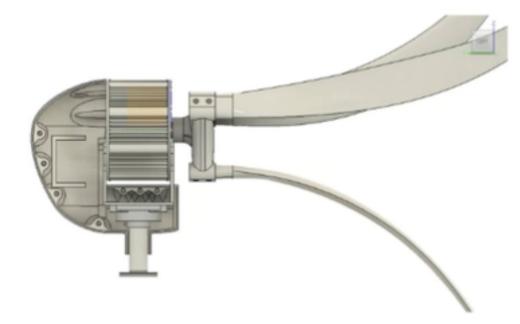
Curacao



Pov	ver	5 MW			
Mod	dels	Bioseed 7,5kW			
Inve	estment	Eur 2.550 / kW			
% 0	occupancy	15%			
ച്ചി	Wind profile	00000			
	kW sale price	00000			
ž	CO2 mitigation	00000			
۶	Environment ris	k 00000			

Ficha técnica – Bioseed 7.5K

Bioseed 7.5K - CF - RP



Descripción del producto

La turbina Bioseed 7,5K es ideal para proyectos de generación distribuida de energía con un LCOE competitivo.

Es pequeña y compacta, incorpora un generador de alta eficiencia de imanes permanentes de 7500W AC trifásico y opciones de monitoreo remoto.



Especifica ción	Bioseed 1.5k
Potencia	7,5 kW – 3 fases220v
Dimensione s	D: 680 cm L: 390cm
Aspas	3 x (4,5 m largo) Materiales: CF: fibra de carbono / RP: PET reciclado
Generador	Imanes permanentes – tierras raras
Monitoreo	RPM, vibración, temperatura, corriente, voltaje, posición, vel. viento.

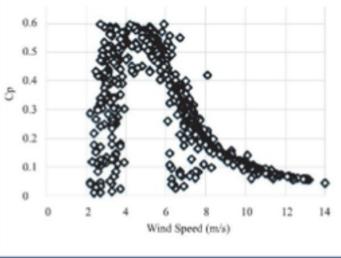
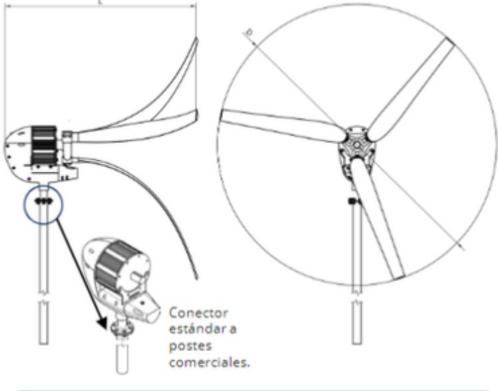


Figura 1. Coeficiente de potencia



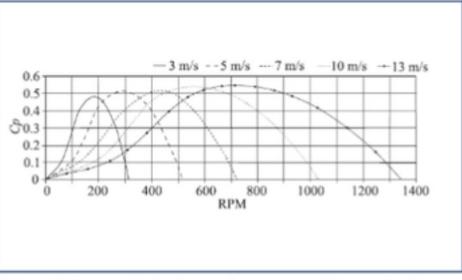




Figura 2. Cp. rendimiento en diversas condiciones de viento

Backup Slide: Asphalt lake Location in Curacao

Tar was dumped in the lake in Willemstad during the Second World War This is a result of the heavy production of Kerosene in the battle against Germany

Total cleaning time estimate is 5 years. The location is not suitable for large industrial Wind Turbines due to LOW WIND SPEEDS.

The use of Bio-Seed turbines would permit agriculture, housing and recreation as well as nature reservation activities, s well as provide GREEN ENERGY FOR THE CITY

BUSKABAAI NV(partially government owned) is the owner of the lands and the cleanup is done by Asphalt lake Recovery Ltd



n in Curacao Q PARSONS KINETICS

Backup Slide: Wolrd Wide projects planned

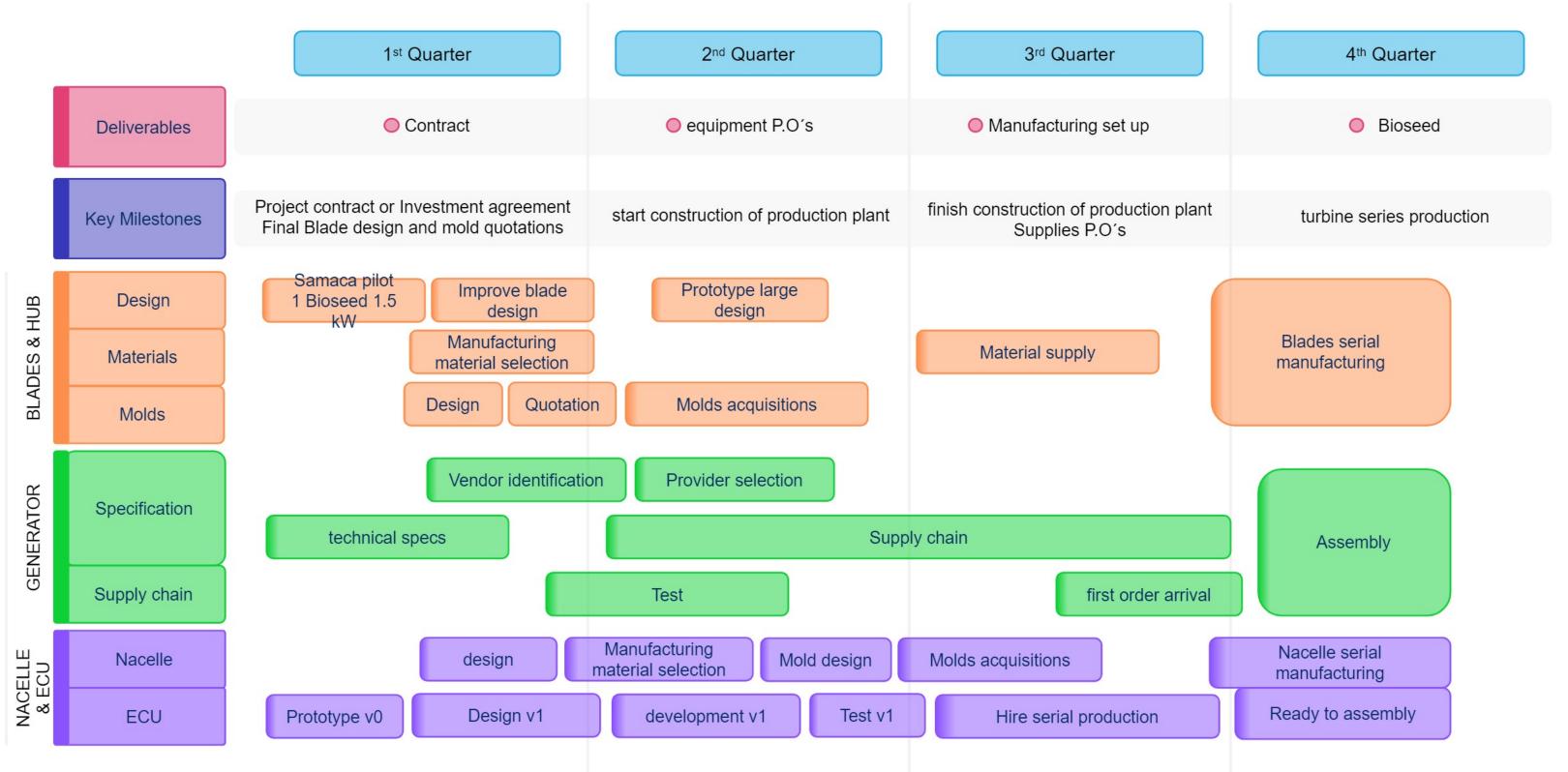
World Wide Planned Projects







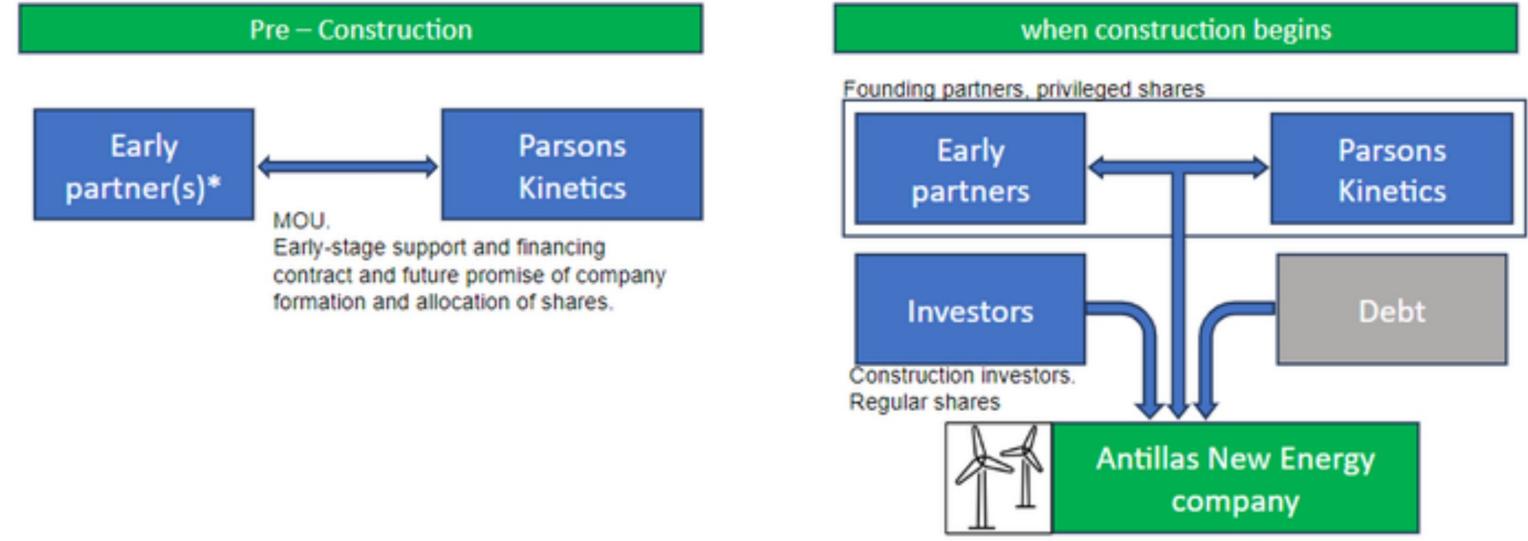
Back Up Slide: TECH ROUTE MAP AND TIME TO MARKET FY 2024



Bioseed Wind Turbine



Back Up Slide: Pilot Project 1: Partnership Structure Dutch Antilles



- Potentially one or multiple partners depending on the final commitment amount from the potential partners.
- Interested partners will enter the joint development agreement with the Parsons Kinetics to support early phases of the project.
- Interested partners will commit and provide financial sponsorship to the Preliminary due diligence and Development and feasibility Phase and In return, interested partner receives a right to subscribe shares of the future development wind farms on a pro-rata basis of the financial contributions, Parsons Kinetics reserve the rights of the 50% of the equity for the future company.



Back up Slide: Levelized Cost Of Energy Comparison Projected: US\$52 / MWh

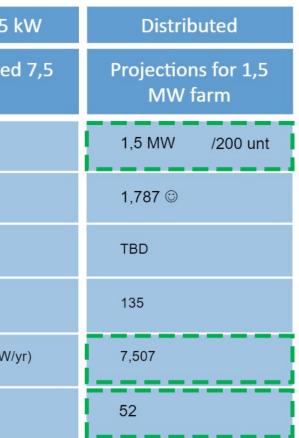
Key Inputs and Levelized Cost of Energy Results

		Land-Based	Offst	nore		Distributed		Bioseed 7,5
Parameter	Unit	Utility-Scale Land-Based	Utility-Scale (Fixed-Bottom)	Utility-Scale (Floating)	Single- Turbine (Residential)	Single- Turbine (Commercial)	Single- Turbine (Large)	Single Biosee kW
Wind turbine rating	MW	3	8	8	20 (kW)	100 (kW)	1.5	7.5 (kW)
Capital expenditures (CapEx)	\$/kW	1,501	3,871	5,577	5,675	4,300	3,540	1,826 ©
Fixed charge rate (FCR) [real]	%	5.88	5.82	5.82	5.88	5.42	5.42	TBD
Operational expenditures (OpEx)	\$/kW/yr	40	111	118	35	35	35	135
Net annual energy production	MWh/MW/yr	3,775	4,295	3,336	2,580	2,846	3,326	40,800 (kWh/kW/
Levelized Cost of Energy (LCOE)	\$/MWh	34	78	133	143	94	68	52

Note: Unless specifically stated, all cost data are reported in 2021 U.S. dollars (USD).



Parsons Kinetics



Back UP Slide: BUSINESS MODEL Calculations

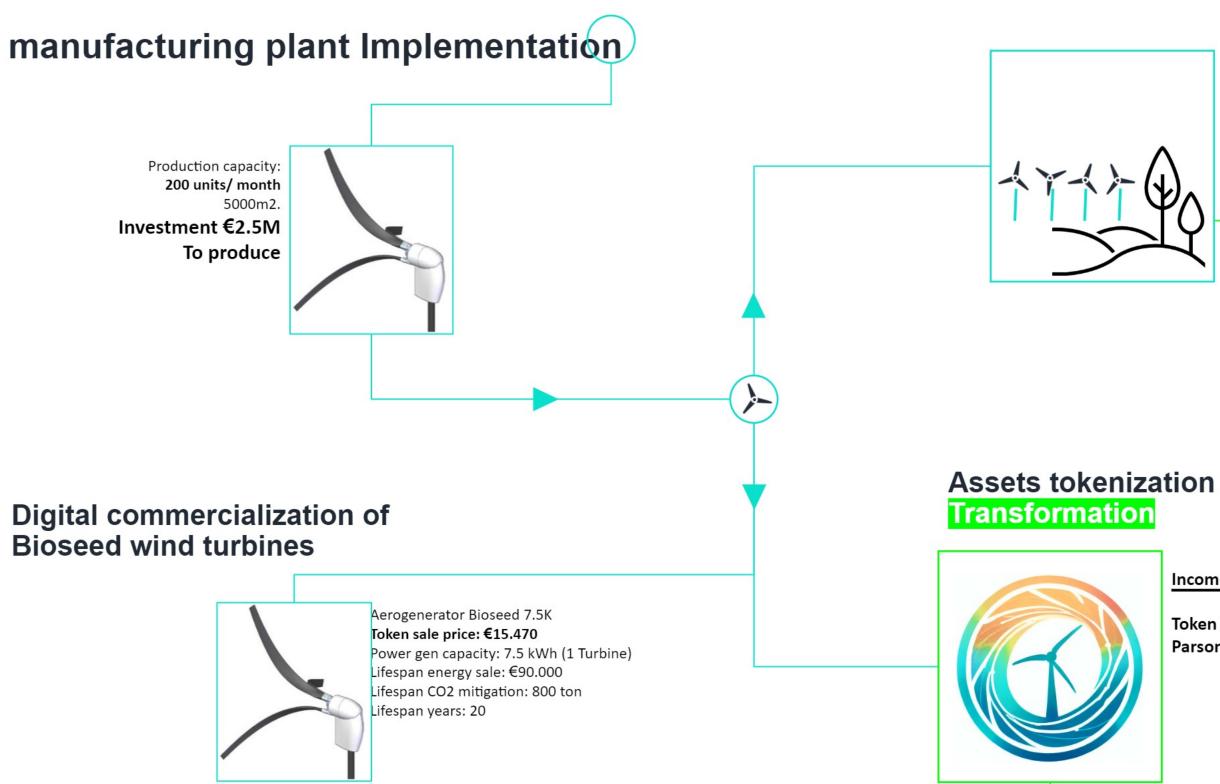
Manufacturing and sell wind turbines

	Total
Payroll	US\$132.000
Warehouse rental	US\$12.000
Accountant and tax rev.	US\$2.500
Grooming and surveillance	US\$3.500
Utilities	US\$8.000
Incidentals	US\$2.700
Technology	US\$2.300
Total Month	US\$163.000
By Turbine:	US\$424
By kW:	US\$57









Implementation of the self operated wind farm

Wind turbines: Bioseed 7.5K Production capacity: up to 35 GW Locations: Antillas + others Investment €1.5M

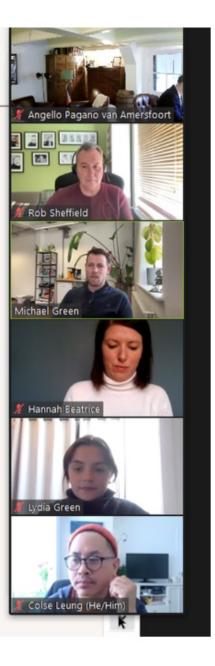
Assets tokenization for **Energy Market**

Income from energy generation

Token Owner – 70% Parsons Kinetics - 30% Operation & Maintenance.





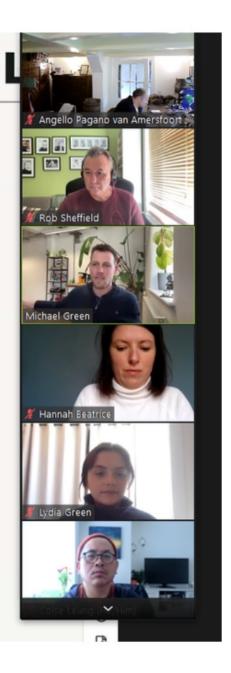


Experience

The questions you need to ask yourself

Before you pitch...

- Who are you pitching to?
- What context do they have at the outset?
- What's their starting mindset?
- What do you want them to feel/think/do at the end?



æ, 2 e, A Qu, ...

Experience

The second conversation

What do you want others to be sharing (and potentially pitching) when you're not there?



The in-person deck

- More targeted
- Light on text and data
- Cues and prompts
- Working in harmony with the presenter

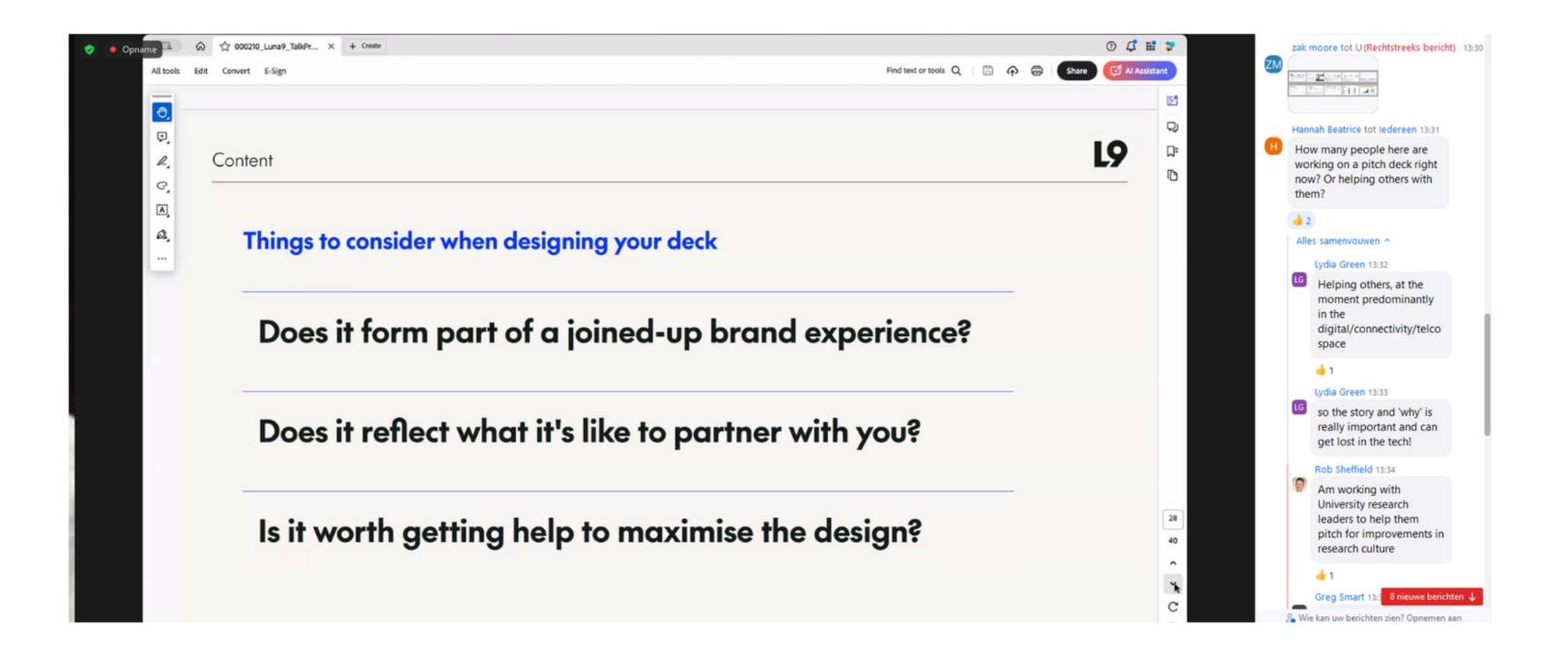


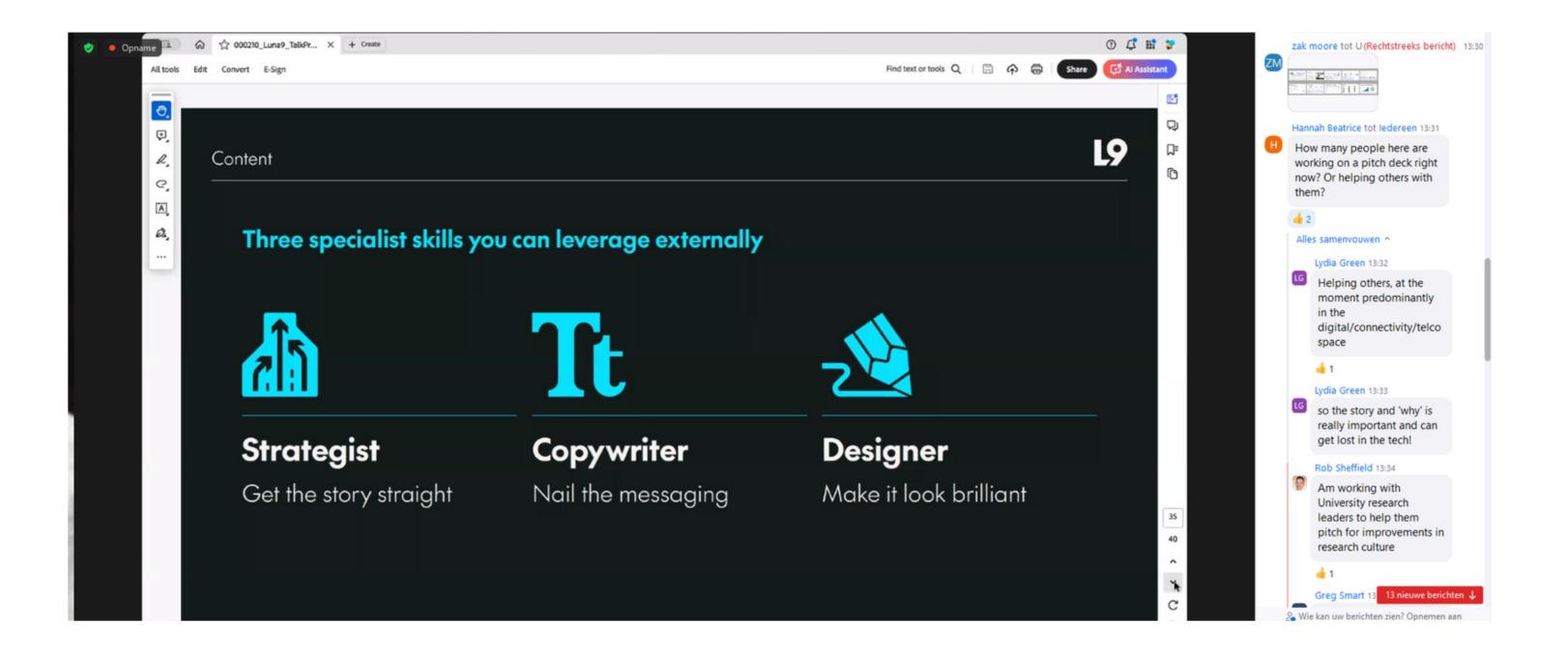
The 'leave behind'

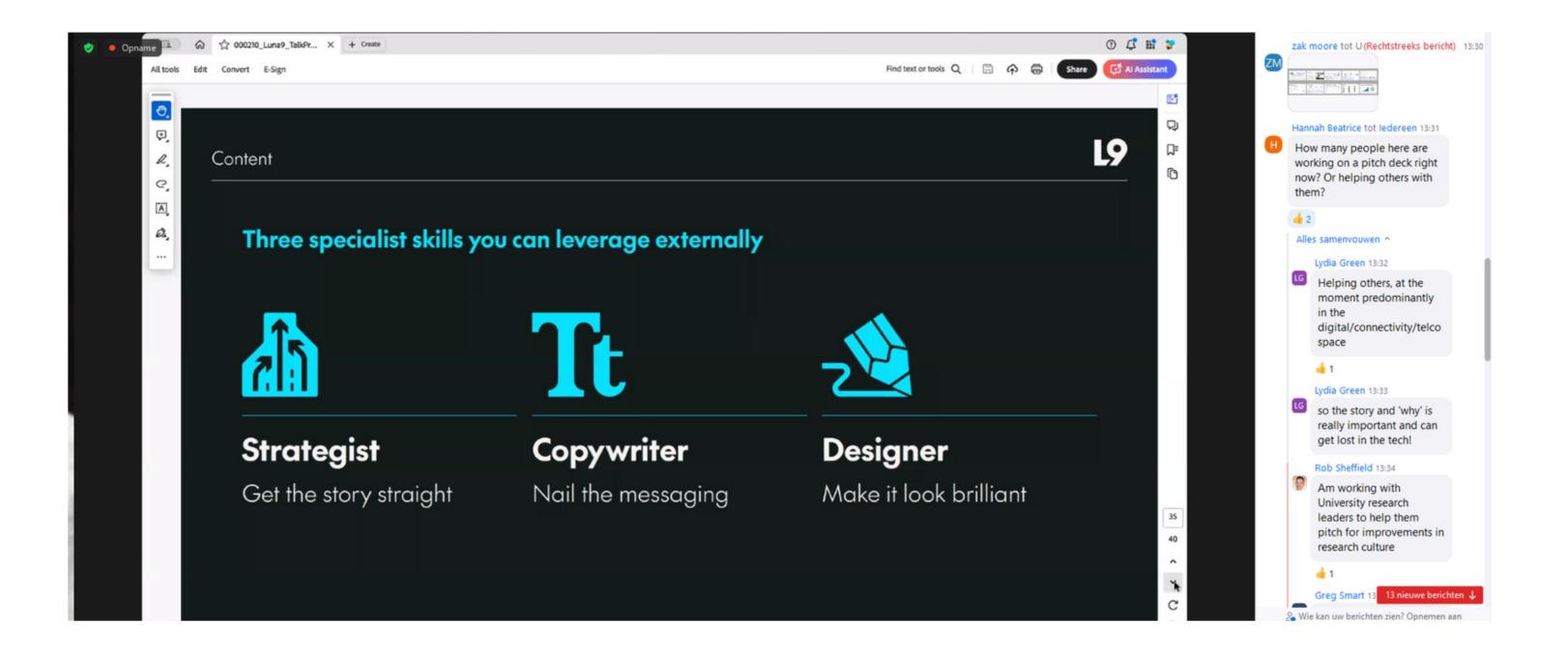
- More versatile
- Has necessary context to work without a presenter
- Potentially less linear
- Familiar but different

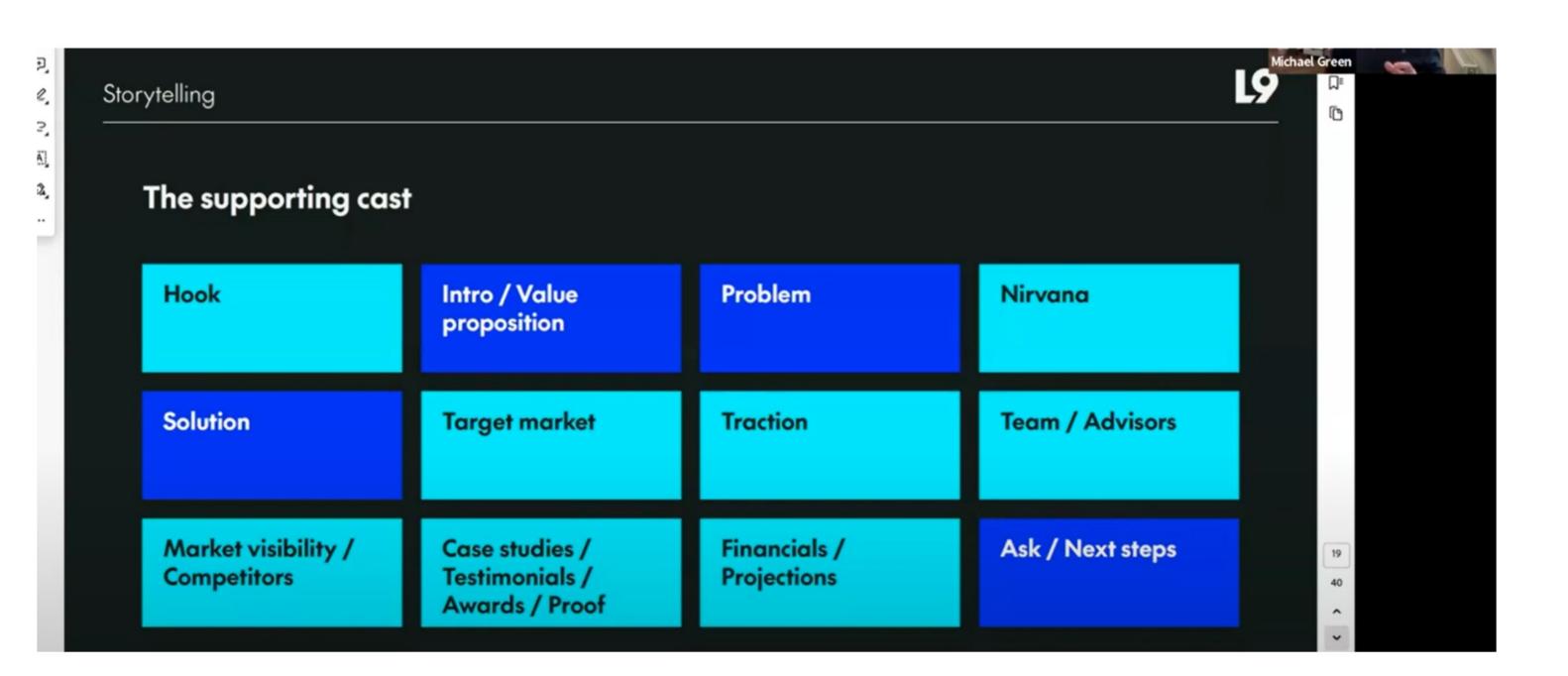


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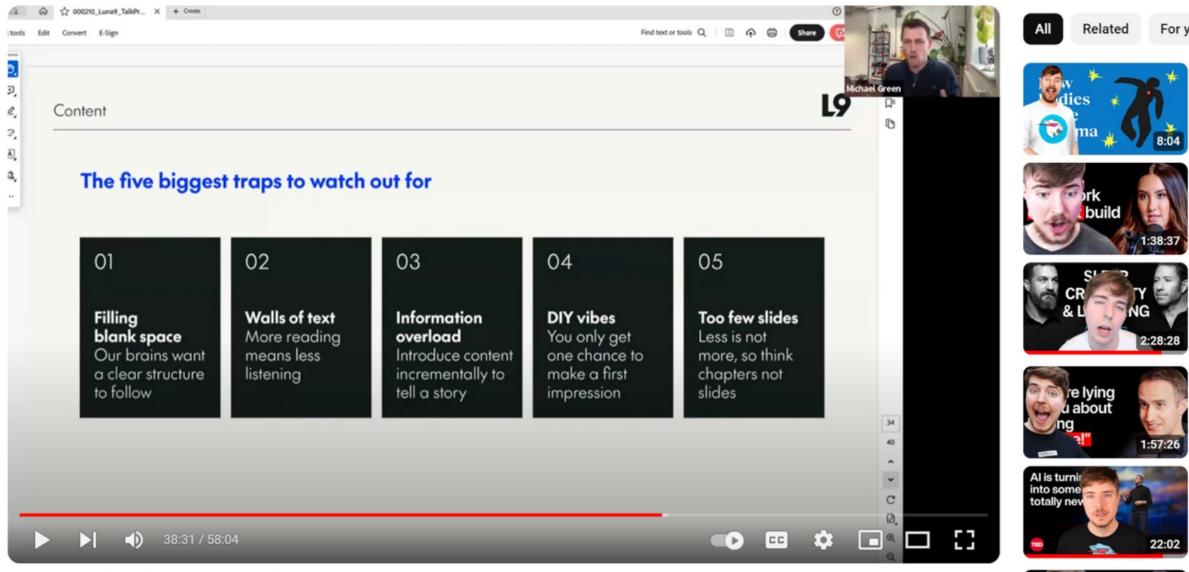
Experience

The questions you need to ask yourself

After you pitch...

- What will you share?
- Would it make sense without you there to pitch with it?
- How would you feel about someone passing it on?
- What is your follow up?





Creating a Knockout Pitch Deck

For you

Watched





"I te

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2.5M views • 5 months ago

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