

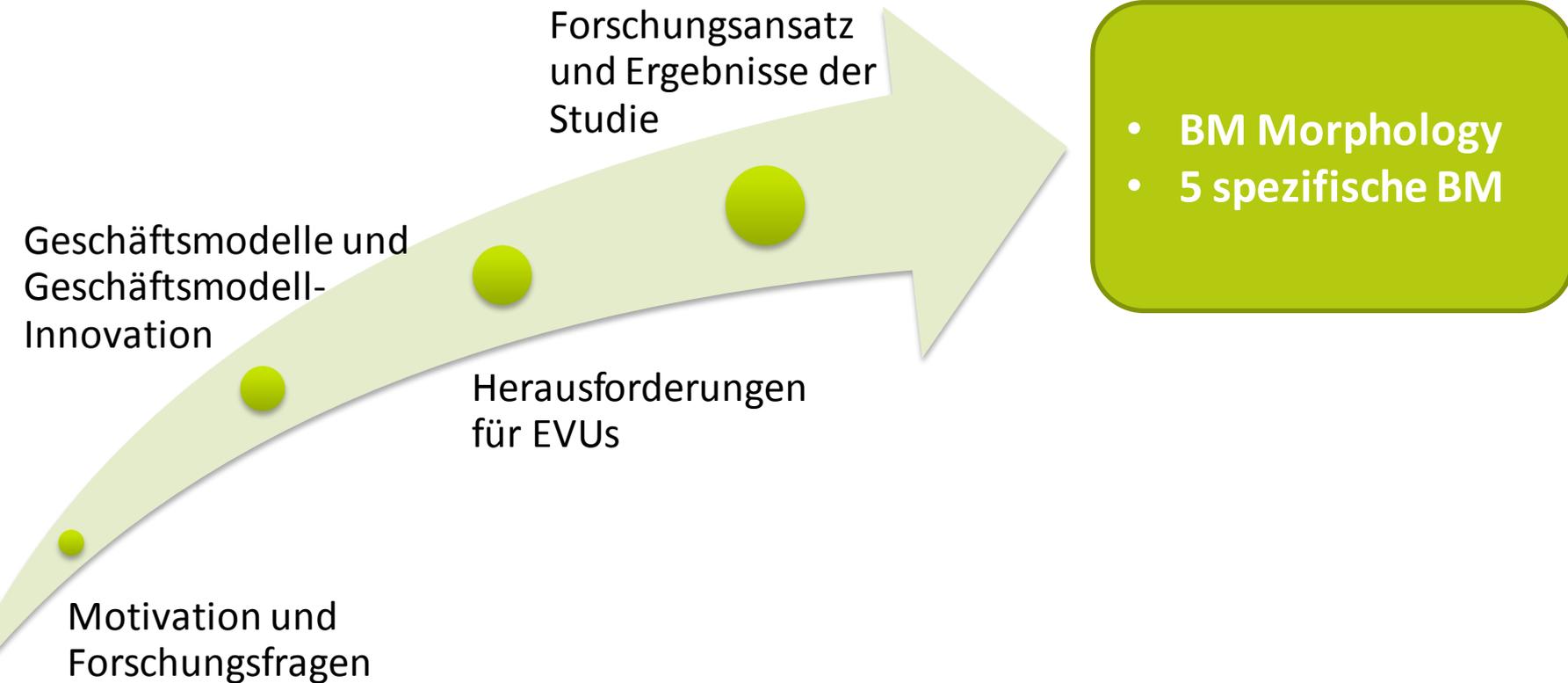
13. Symposium Energieinnovation

SMALL-SCALE, BIG IMPACT – UTILITIES' NEW BUSINESS MODELS FOR “ENERGIEWENDE”

by

Wolfgang A. MARKO

14.02.2014





**WIE Herausforderungen
begegnen?**

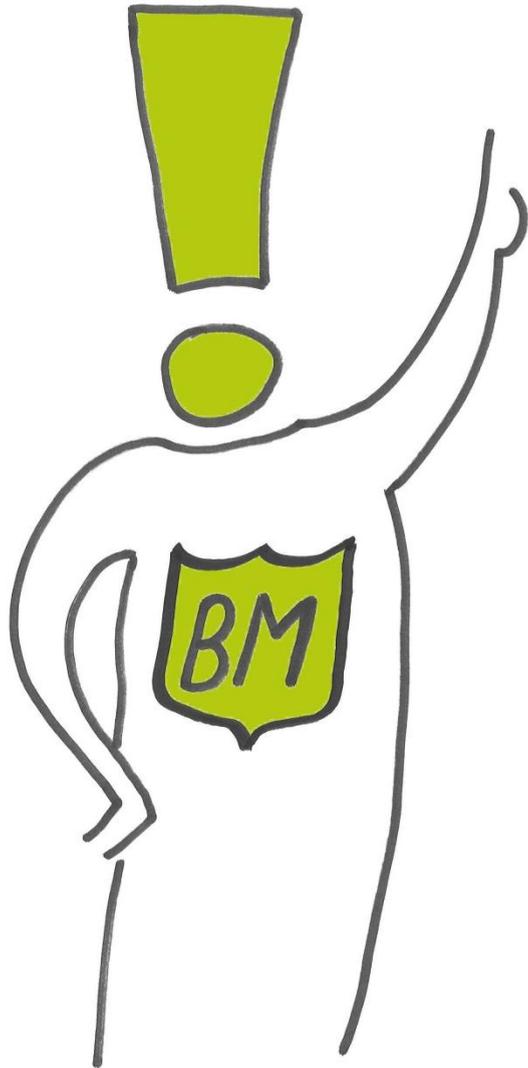


**Rollen im zentralen-
dezentralen Energiesystem?**



**Geschäftsmodelle für kleine,
dezentrale, erneuerbare
Energiebereitstellung (DEE)?**

BM ist mehr als Ertragsmechanismus!



- Begriffsvielfalt, unterschiedliches Verständnis
- “[..] a business model describes the rationale of how an organization **creates, delivers, and captures value.**”
(Osterwalder & Pigneur 2010, p.14)
- “Business Model Canvas“ (Osterwalder & Pigneur 2010)
 - 9 Elemente

"Business Model Canvas"

The Business Model Canvas

Designed for:

Designed by:

On: Day: Month: Year:
 Iteration:

<h3>Key Partners</h3>  <p>Who are our Key Partners? Who are our key suppliers? Which Key Resources are we acquiring from partners? Which Key Activities do partners perform?</p> <p><small>www.businessmodelgeneration.com Can be shared and customized © 2010 Alexander Osterwalder All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the copyright owner.</small></p>	<h3>Key Activities</h3>  <p>What Key Activities do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue streams?</p> <p><small>www.businessmodelgeneration.com Can be shared and customized © 2010 Alexander Osterwalder All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the copyright owner.</small></p>	<h3>Value Propositions</h3>  <p>What value do we deliver to the customer? Which one of our customer's problems are we helping to solve? What bundles of products and services are we offering to each Customer Segment? Which customer needs are we satisfying?</p> <p><small>www.businessmodelgeneration.com Can be shared and customized © 2010 Alexander Osterwalder All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the copyright owner.</small></p>	<h3>Customer Relationships</h3>  <p>What type of relationship does each of our Customer Segments expect us to establish and maintain with them? Which ones have we established? How are they integrated with the rest of our business model? How costly are they?</p> <p><small>www.businessmodelgeneration.com Can be shared and customized © 2010 Alexander Osterwalder All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the copyright owner.</small></p>	<h3>Customer Segments</h3>  <p>For whom are we creating value? Who are our most important customers?</p> <p><small>www.businessmodelgeneration.com Can be shared and customized © 2010 Alexander Osterwalder All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the copyright owner.</small></p>
<h3>Key Resources</h3>  <p>What Key Resources do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue Streams?</p> <p><small>www.businessmodelgeneration.com Can be shared and customized © 2010 Alexander Osterwalder All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the copyright owner.</small></p>		<h3>Channels</h3>  <p>Through which Channels do our Customer Segments want to be reached? How are we reaching them now? How are our Channels integrated? Which ones work best? Which ones are most cost-efficient? How are we integrating them with customer routines?</p> <p><small>www.businessmodelgeneration.com Can be shared and customized © 2010 Alexander Osterwalder All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the copyright owner.</small></p>		
<h3>Cost Structure</h3>  <p>What are the most important costs inherent in our business model? Which Key Resources are most expensive? Which Key Activities are most expensive?</p> <p><small>www.businessmodelgeneration.com Can be shared and customized © 2010 Alexander Osterwalder All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the copyright owner.</small></p>		<h3>Revenue Streams</h3>  <p>For what value are our customers really willing to pay? For what do they currently pay? How are they currently paying? How would they prefer to pay? How much does each Revenue Stream contribute to overall revenues?</p> <p><small>www.businessmodelgeneration.com Can be shared and customized © 2010 Alexander Osterwalder All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the copyright owner.</small></p>		

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(Osterwalder & Pigneur 2010)

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- **Prozessuale Sicht** vs. ergebnisorientierte Sicht
 - Prozess der Verbesserung und des Wandels von mind. einem Element des BM (Sinfield et al. 2012)

- Aktuelle Literatur:
generische BMs → Rolle der EVUs
 - EVU- bzw. Kunden-seitige Geschäftsmodelle (Richter 2012)
 - “plug & play”, “community microgrid”, “company control” (Sauter & Watson 2007)
 - “distributor”, “after-sales specialist”, “lead generator”, “aggregator” (Busnelli et al. 2012)

1. Entwicklungsziele erneuerbare Energie

- 20-20-20-Ziele, Roadmap 2050
- Vorrang Erneuerbare, Netzbalance, konventionelle KWs in Teillastbetrieb

2. Kostendruck und alternde KW-Park

- Teillast → steigende Kosten €/kWh
- viele alte Kohle-KW nahe dem technischen Lebensende

3. Wandel in Kundeninteresse & Verhandlungsposition

- Kunden → „Prosumer“
- Energieeinsparung im privaten und kommerziellen Bereich

4. Kognitive Barrieren geg. dez. ernb. Energiebereitst. (DEE)

- DEE läuft klass. BM zuwider
- Disruption durch DEE bezweifelt/ geleugnet → Gefahr! (Bsp Kodak)

Notwendigkeit neuer Geschäftsmodelle

- Energiedienstleistungen
- ...
- **Integration von dezentraler erneuerbarer Energiebereitstellung (DEE)**

- Technologische Perspektive, intelligente Energiebereitstellung und –nutzung (Effizienz, Nachhaltigkeit)
- Qualitative Untersuchung und Konzeptbildung

- Analyse
 - der Literatur → BM für erneuerbare Energien
 - von Unternehmen (n = 11; real-world BMs)

- Ergebnisse:
 - „BM Morphology“
 - 5 konkrete BM-Ansätze

„BM Morphology“ als generisches Tool

Characteristic	Subcharacteristic	Expression								
Customer Interface	Customer segments	Mass Customers			Individual Customers					
		One-family dwelling	Flat	Agriculture	Trade and small Industry	Multiple dwelling	medium-sized Property	Hotel industry	Municipality	Local heat network
	Distribution channels	Own					Partner			
		Sales force		Online		Events		Partner stores	Online	
Relationships	Customer acquisition			Customer retention			Upselling			
	Personal assistance	Key Account	Automated	Personal assistance	Key Account	Automated	Personal assistance	Key Account	Automated	
Value Proposition	Products and services	low complexity				medium complexity			high complexity	
		Power	Heat	Service / Maintenance	Insurance	Consulting	Provision of facilities	Planning and Installation	Ownership/ Contracting	Operation
Infrastructure Management	Key activities	Energy management	Primary energy carrier management	Risk pooling		Consulting	Facility sales	Project management	Facility administration	Facility operation
	Key resources	Know-how			Manpower				Facility	Financing and Funding
		Operation	Market	Technology	Consulting	Operations	Services	Sales		
Key partners	IT companies	Agents / consultants	Financier	Facility manufacturers	Installers	Operators	Service partners			
Financial Aspects	Revenue model	Product-related			Product- and service-related			Service-related		
		Feed-in	Base rate	Output-related fee	Facility sale	Facility contracting	Performance contracting	Consulting	Operation	Service/Maintenance/ Insurance
	Cost structure	IT costs	Infrastructure costs	Primary energy carrier	Total facility costs	Shared facility costs	Consulting	Operation	Service/ Maintenance/ Insurance	Sales and Marketing

„BM Morphology“ als generisches Tool

Characteristic	Subcharacteristic	Expression								
Customer segments	Mass Customers	One-family dwelling	Flat	Agriculture	Trade and small industry	Multiple dwelling	medium-sized Property	Hotel industry	Municipality	Local heat network
		Individual Customers								

Customer segments	Mass Customers				Individual Customers				
	One-family dwelling	Flat	Agriculture	Trade and small industry	Multiple dwelling	medium-sized Property	Hotel industry	Municipality	Local heat network

Relationships	Personal assistance	Key Account	Automated	Personal assistance	Key Account	Automated	Personal assistance	Key Account	Automated
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Products and services	low complexity				medium complexity			high complexity	
	Power	Heat	Service / Maintenance	Insurance	Consulting	Provision of facilities	Planning and Installation	Ownership/ Contracting	Operation
Key activities	Energy management	Primary energy carrier management	Risk pooling		Consulting	Facility sales	Project management	Facility administration	Facility operation

Key partners	IT companies	Agents / consultants	Financier	Facility manufacturers	Installers	Operators	Service partners		
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Financial Aspects	Cost structure	Fixed costs	Base rents	Infrastructure costs	Variable costs	Facility sale	contracting	contracting	contracting	Contracting	Operation	Insurance
		IT costs		Primary energy carrier	Total facility costs	Shared facility costs	Consulting	Operation	Operation	Service Maintenance Insurance	Sales and Marketing	

Matrix BM-Technologie

Kundensegment Business Model Technologie	Massenkunden		Einzelkunden		
	BM 1	BM 2	BM 3	BM 4	BM 5
	BHKW-Contracting	Brennstoffzellen-Contracting	Komplett-Service-Paket	Wärme-intensiv	Strom-intensiv
BHKW	✓		✓	✓	✓
Brennstoffzelle		✓	✓		
Kleinwindenergie			✓		
Kleinwasserkraft			✓		
Photovoltaik			✓	✓	✓
Thermische Speicher	(✓)	✓	✓	✓	✓
Elektrische Speicher		✓	✓	✓	✓

Massenkunden

- **BM 1 BHKW-Contracting:**
 - Wärme- und Stromlieferung, Contracting-Modell durch EVU finanziert (inkl. Beratung, Versicherung, Service, Wartung, Brennstoffmanagement...)
 - Für “Komfort-Kunden”, der sich um nichts kümmern will

- **BM 2 Brennstoffzellen-Contracting:**
 - Wärme- und Strombereitstellung durch Biogas-betriebene Brennstoffzelle (Biogasversorgung, Wärmelieferungsvertrag)
 - Stromgeführter Betrieb → Virtuelles Kraftwerk
 - Für “Komfort-Kunden”, technologie-affinen oder ökologisch-bewussten Kunden

Einzelkunden

■ **BM 3 Komplett-Service-Paket:**

- Von der Energieanalyse, energetische Verbesserungs- und Sanierungsvorschläge, die Anlagenplanung, über Anlagenerrichtung bis hin zu Betrieb, Monitoring und Wartung.
- Ergänzend: Beratung in rechtlichen, finanziellen und betriebswirtschaftlichen Aspekten (Aufbau Betriebsgesellschaft, adäquates Finanzierungsmodell,...)

■ **BM 4 Wärmeintensiv:**

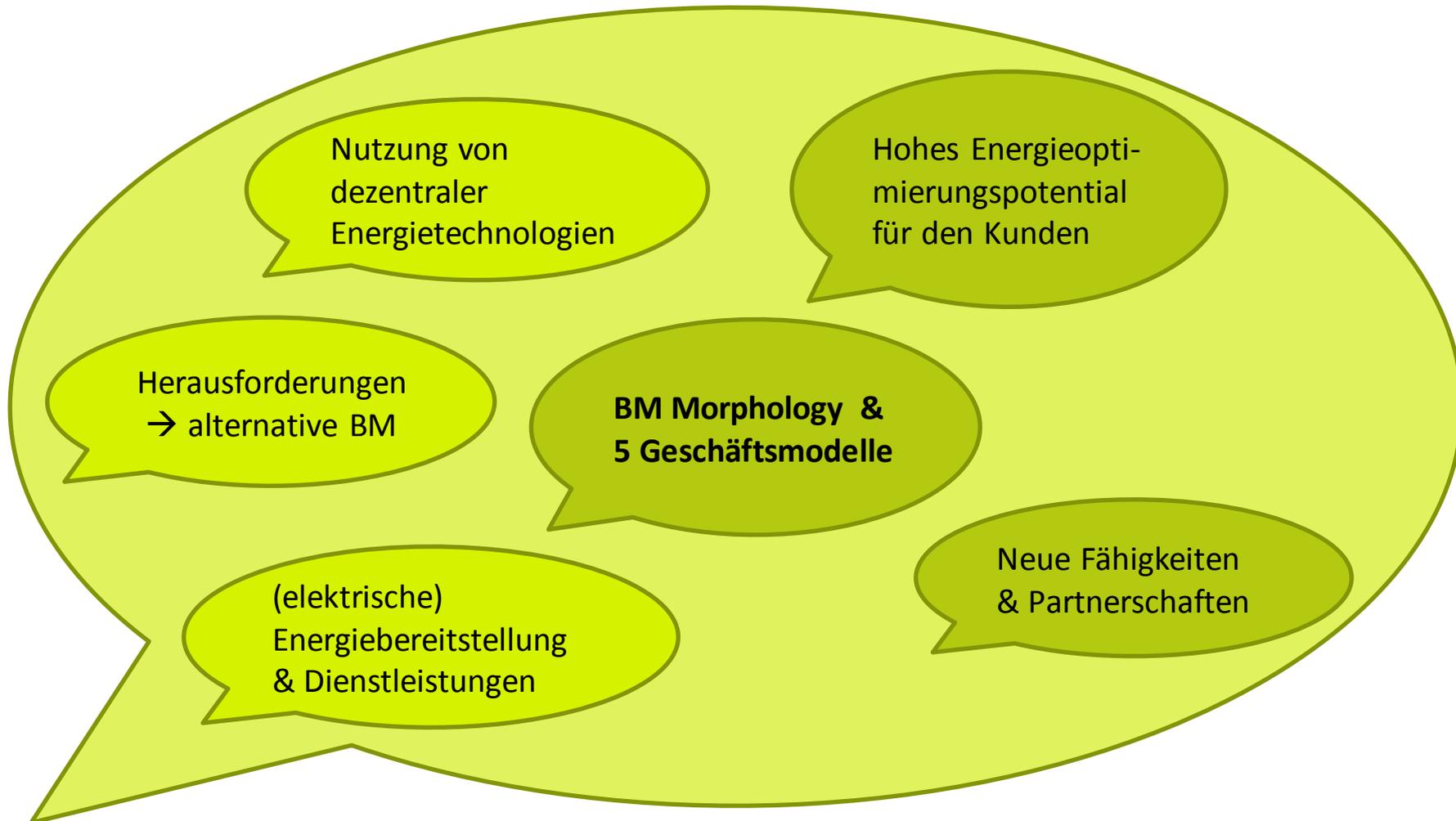
- holzverarbeitendes Gewerbe, Gartenbau, Wäschereien
- Bereitstellung von Wärme und Strom ggf. in Kombination mit **Nutzung lokal anfallender Abfallstoffe und Abwärmern**
- A) EVU als Planer, Errichter und Lieferant von Strom und Primärenergieträger
- B) Komplett-Service-Variante (basierend auf Anlagen-Contracting) mit Strom- und Wärmeversorgung

■ **BM 5 Stromintensiv:**

- Maschinenschlossereien, Schmieden, Produktionsbetriebe aller Art, Lagerlogistiker, Bäckereien, Kaufhäuser (Beleuchtung, Lüftung),
- Energieberatung und Planung als Basis für ein Modell in 2 Varianten (wie BM 4)

- Massenkunden: einfaches, generalisierbares Modell
→ Kosten-Nutzen-Verhältnis
- Einzelkunden: interessanter, höheres Potential
- Zahlungsbereitschaft bzgl. Beratung und Dienstleistungen eher gering
→ Produkt-Dienstleistungskombination, Marketingaktivität

- Limitationen:
 - BM-Entwicklung auf Österreich fokussiert
 - große österr. EVUs haben im internationalen Vergleich eher mittlere Größe und stehen erneuerbarer Energie traditionell offener gegenüber (Wasserkraft)
 - keine betriebswirtschaftliche Detailberechnung, da sehr stark EVU- und Kunden-individuell



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