Contents

1	Unique, Multi-generational Development: A Lesson in Forward						
	Planning						
	1	Parti	cular Features of the Region	2			
		1.1	Geological History of Champagne	2			
		1.2	Visual Appearance of the Chalk Champagne Region	4			
		1.3	The Champagne Climate	4			
		1.4	Agricultural Properties of Chalk Soil	6			
		1.5	Methods of Increasing Fertility	7			
	2	Hist	ory	7			
		2.1	From the Eighteenth Century Until the 1950s	8			
		2.2	Farmers' Unions in Champagne	11			
		2.3	From Farmers' Unions to Cooperatives	15			
		2.4	Agricultural Cooperatives and Cereal Processing	16			
	3	First	Steps in the Development of the Bazancourt-Pomacle Site	19			
		3.1	Towards Collaborative Research	19			
		3.2	From ISTV to the Involvement of Academic Research	21			
	References						
2	An Original Business Model: The Integrated Biorefinery						
	1	The	Concept of Biorefinery	26			
		1.1	Definitions, Technical Status and Typology	26			
		1.2	The Viability of the Biorefinery	30			
		1.3	The Bazancourt-Pomacle Biorefinery	31			
	2	Cha	nges in the Environment that made the Bazancourt-Pomacle				
		Bior	Biorefinery				
		2.1	Exogenous Factors	41			
		2.2	Endogenous Factors	44			
		2.3	The Strategies and Solutions that Have made the Biorefinery				
			What It Is Today	51			
	3	The	Bazancourt-Pomacle Biorefinery: An On-Going				
		Succ	cess Story?	58			
		3.1	Technological Readiness Levels: TRL	58			

digitalisiert durch DEUTSCHE NATIONAL BIBLIOTHEK

Ref	3.2 3.3 ference	BIOAMBER: A Locally Unrecognised Success Story	59 62 65						
inc		· · · · · · · · · · · · · · · · · · ·	67 68						
2	Different Aspects of Industrial Symbiosis at the		UC						
2	Bazancourt-Pomacle Biorefinery		70						
	2.1	The Bazancourt-Pomacle Biorefinery and Its Local	/(
	2.1	-	71						
	2.2		72						
	2.3		74						
	2.4	· · · · · · · · · · · · · · · · · · ·	78						
Re		•	80						
Prospects for the Bazancourt-Pomacle Biorefinery Between									
			81						
1		lenges for the White Biotechnology Centre	0.						
			83						
	1.1	, ,	84 85						
	1.3	•	85						
2			86						
2	2.1	The Sale by ARD of Its Subsidiary SOLIANCE	ot						
	2.1	·	86						
	2.2	•	87						
	2.3		88						
3	Potential for Integration of the Upstream Value Chain		89						
5	3.1		9(
	3.2	•	9						
	3.3	1	91						
4			92						
	4.1	Land Available for New Manufacturing Facilities	-						
			92						
	4.2		93						
	4.3	· · · · · · · · · · · · · · · · · · ·	94						
5	Mair	· · · · · · · · · · · · · · · · · · ·	95						
_	5.1		95						
	5.2		96						
	5.3	Is It Possible to Benefit from Cooperative Values Without							
			97						
	-								
6	Does	s the IEB Need a More Formal Governance Structure?	9						
6	6.1	Networking, Strategic Monitoring and Strategic	9.						

		6.2	Technology Transfer and Exploitation of Knowledge				
			and Skills	98			
		6.3	Financial Engineering	98			
	Re	feren	ces	100			
5	Ge	neral	l Conclusion	101			
	1	Wha	t Is the True Nature of the Bazancourt-Pomacle Integrated				
		Bior	efinery?	101			
		1.1	Integrated Biorefinery and Industrial District	101			
		1.2	Biorefinery and Economic Rationale	102			
		1.3	Biorefinery and Ecosystem: An Unplanned Process,				
			but One that Did not Occur by Chance	103			
	2	Wha	t Next?	105			
		2.1	A Future Research Agenda	105			
		2.2	Will the Private Sector Continue Its Initial Efforts?	106			
		2.3	The Role of Public Policy	107			
	Re	feren	ces	108			
Annexes							
Gl	lossa	ary of	Selected Scientific and Technical Terms	119			
Gl	lossa	arv R	eferences	123			