

TABLE OF CONTENTS

1.	OPEN SYSTEMS AND INTEROPERATION: KEY TO EFFICIENT COLLABORATION	6
1.1	Open Systems	8
1.2	Open Source	10
1.3	Open Standards	10
1.4	Open Systems in the PLM Context	11
1.5	The PLM Vision	11
1.6	Open Systems Characteristics	12
2.	Achieving Interoperability: Best Practices	18
2.1	Creating Interoperable Environments	19
2.2	Operations Phase	24
2.3	Best Practices Process	24
3.	CASE STUDIES	26
3.1	AEROSPACE DEFENSE CONTRACTOR	27
3.2	LARGE AUTOMOTIVE/AEROSPACE SUPPLIER	29
3.3	INTEGRAL POWERTRAIN	35
3.4	SIEMENS INDUSTRIAL TURBINES	38
3.5	TOYOTA FORMULA ONE TEAM	42
3.6	AEROSPACE ENGINE SUPPLIER	46
4.	PLM INTEROPERATION - BUSINESS VALUE	49
5.	OPEN SYSTEM METRICS	57
6.	ROAD AHEAD: FUTURES, ISSUES, AND CHALLENGES	58
6.1	Open Systems and Market Success	58
6.2	Future Issues and Challenges	59
7.	ABOUT DARATECH	61

TABLE OF TABLES

Table 1 Characteristics of Open Systems: Access	13
Table 2 Characteristics of Open Systems: Data Models	14
Table 3 Characteristics of Open Systems: API	15
Table 4 Characteristics of Open Systems: System Source Code	16
Table 5 Characteristics of Open Systems: Architecture	17
Table 6 Characteristics of Open Systems: Commitment	17
Table 7 Challenges Identified by Case Studies	50
Table 8 Business Values of Interoperation	51

TABLE OF FIGURES

Figure 1 Open PLM systems lead to more competitive enterprises	6
Figure 2 Open Systems Dashboard	9
Figure 3 Barriers to collaboration	18
Figure 4 Plan, Implement, Operate	20
Figure 5 Building Blocks of Competitiveness	56