

The Future Cloud ECM

(AraWorks/AraCloud)

for the SMB's smartwork solution





What is ECM (Enterprise Content Management)

- Enterprise Content Management (ECM) is defined by AIIM International as the technologies, tools, and methods used to capture, manage, store, preserve, and deliver content and documents related to organizational processes.

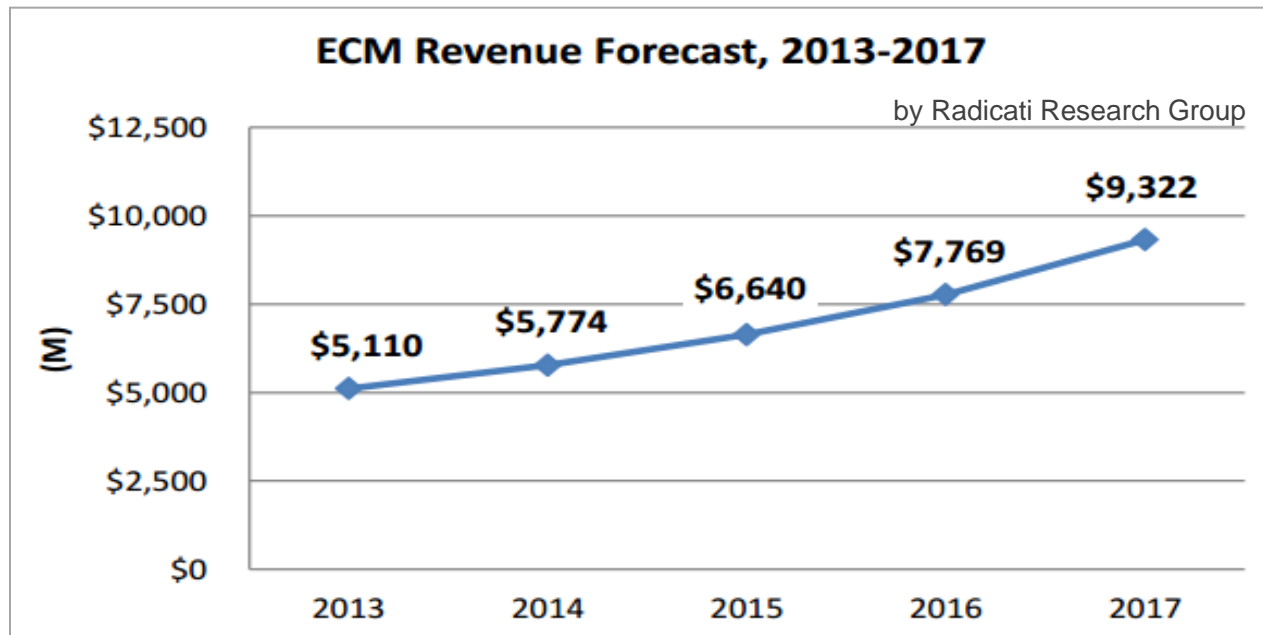


Figure 1: ECM 101 (Source: AIIM International and Doculabs)



ECM Market Size

- Revenue Forecast : 5.1 Billion-U\$ (Y2013) → **9.3 Billion-U\$ (Y2017)**
- Concept : EDMS → ECM → PGECM → Cloud_ECM
- Technical : Server(PC-network) → Web/App → Smartwork (HTML5, OS_free)
- ✓ **Major Point → No_ECM Vendors of SMB market focusing**





ECM Market Trend

➤ **Mobile and Cloud are primary drivers of rapid change**

- Type : ①Hybrid Cloud ECM, ②ECM solution with Public Cloud, ③ECM hosted services
- Currently, just 12% is using the Cloud ECM Application.
- **88% will be the future potential market for the Cloud ECM Application..**

- Gartner: "...more ECM vendors are offering a lightweight cloud-based environment to address emerging market needs and possibly to prevent their client bases from exploring the popular cloud-based file sharing environments, which only offer a fraction of the full functionality of ECM. This area of technology may become a common feature in ECM systems during the next few years. As the use of ECM begins to increase on mobile devices, we expect to see a generational makeover, with ECM moving further away from its roots in networked back-office environments."
- Forrester: "'Mobile First' has become the user expectation. The work-anywhere future is a world in which work is something you do, not a place you go. End users are demanding new systems of engagement that focus on the context in which they work and not the processes that drive the business function."

Major ECM Vendors/Pricing

- The Global ECM Makers : EMC, Laserfiche, OpenText, Hyland, IBM, Oracle, Xerox, etc.
- ❖ Top 7's Sales Record : **3.85 Billion-U\$** (Y2013)
- Vendors' Pricing (200users/1,000users)
 - EMC : U\$200K / US\$870K
 - OpenText : US\$300K / US\$650K
 - IBM : US\$350K / US\$1,000K
 - Oracle : US\$330K / US\$960K
 - ✓ Other Cost (DB, Server/Storage H/W & S/W License, Customization/Maintenance Cost & etc.) will be added.



By Info-Tech Research Group

- Champions receive high scores for most evaluation criteria and offer excellent value. They have a strong market presence and are usually the trend setters for the industry.
- Market Pillars are established players with very strong vendor credentials, but with more average product scores.
- Innovators have demonstrated innovative product strengths that act as their competitive advantage in appealing to niche segments of the market.
- Emerging Players are newer vendors who are starting to gain a foothold in the marketplace. They balance product and vendor attributes, though score lower relative to market Champions.



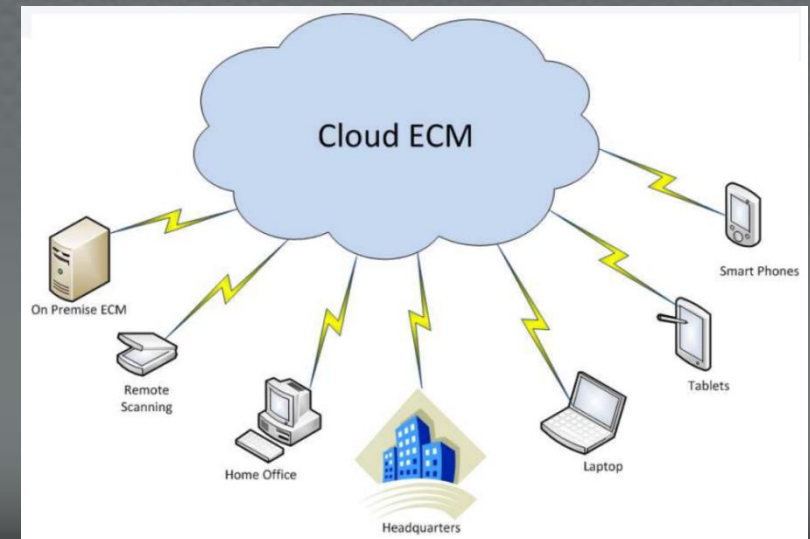
Existing ECM Products

- On Premises ECM Applications
 - ✓ Not unusual spend \$1 million or more for software and services
 - ✓ Not unusual spent another \$200,000 or more for hardware
 - ✓ It can take 6 to 18 months to deploy
 - ✓ Not unusual to spend \$150,000-\$200,000 per year for Maintenance
- Very high Total Cost of Ownership (TCO)
- These costs limits the businesses that can handle this type of an expense
- In most cases implementations are siloes
- In most cases not easily accessible remotely, non-collaborative

※ Gartner states that as much as 70% of IT budget is spent on maintenance.

What is Cloud ECM

- Content Concentric Applications
- Collaborative or Sharing Applications
- Enterprise Content Access for a number of devices:
 - ✓ **Mobile Phones**
 - ✓ **Tablets**
 - ✓ **Laptop**
 - ✓ **Remote workers**
- Agility: Fast Start Up
- Reliability & Scalability
- Lifecycle management
- Complete Solution
- Much lower Start up cost
- **Much lower Cost of Ownership**



Current Cloud ECM Models

➤ Using the followings' Cloud Solution Models

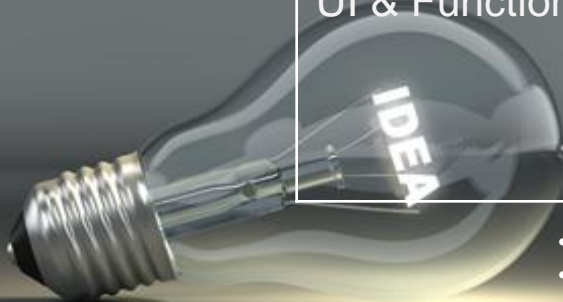
- ✓ Hosted Solution (HS)
- ✓ Software as a Service (SaaS)
- ✓ Platform as a Service (PaaS)
- ✓ Infrastructure as a Service (IaaS)

But, still high cost for SMB company.

➤ Existing ECM vs. Current Cloud ECM Cost Comparison (for 200user)

Existing (On-Premises) ECM	Current Cloud ECM
5Year Total Cost : U\$1,260K	5Year Total Cost : U\$525K
Hardware – U\$150K Software – U\$200K Installation - U\$100K UI & Function Dev't - U\$150K 6 or 8 month Implementation time 5 Year Capital Costs U\$300K 5Year Maintenance Costs U\$360K	UI & Function Dev't - U\$150K Monthly Costs – U\$5K (5year:U\$300K) 2 to 3 months Implementation Time 5Year Capital Costs U\$75K No Annual Maintenance Costs Lower Cost Application, but no Owership

- 5Year Capital Costs : 10% interest / year, U\$600K X 10% X 5years = U\$300K
- 5Year Maintenance Costs : 1year warranty, 15% maintenance cost, U\$600K X 15% X 4years = U\$360K



Our Cloud ECM(AraWorks) Benefit-1

- Contents Concentric Structure & Lifecycle Management
- Unicode based multi Language support
- Free Platform (Linux, Windows, Unix) & Multi DB (Mysql, Oracle, MSsql, Maria, etc.)
- Any Device Support (PC, iOS, Android, etc.)
- **Lowest cost of Ownership** (for 200user)

Just 20% Cost
80% Cost Save

Current Cloud ECM	Our Cloud ECM (AraWorks)
5Year Total Cost : U\$525K	5Year Total Cost : U\$105K
UI & Function Dev't - U\$150K Monthly Costs – U\$5K (5year:U\$300K) 2 to 3 months Implementation Time 5Year Capital Costs U\$75K No Annual Maintenance Costs No Ownership	Hardware - U\$10K Software - U\$30K Install & UI/Function Setting - U\$10K 1 to 2 months Implementation Time 5 Year Capital Costs U\$25K 5Year Maintenance Costs U\$30K Lowest Cost of Ownership

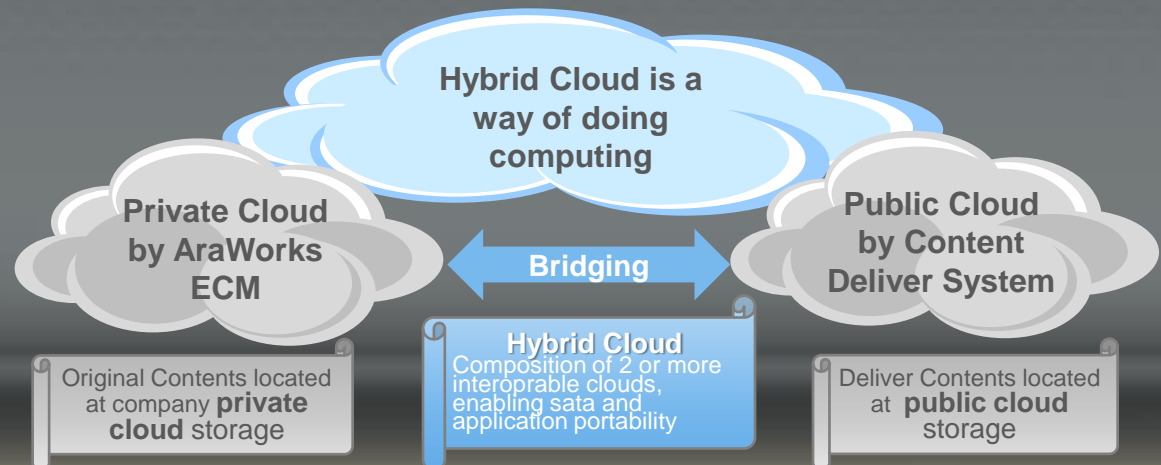
- ❖ AraWorks can reduce the UI/Function Dev't Cost, because it is consisted by our own ECM-Framework & Application UI & Function.
- ❖ H/W is just enough for the NAS-equipment including Linux-OS & Mysql.
- ❖ Our Technology can reduce the H/W & S/W Cost by open source policy.



Our Cloud ECM(AraWorks) Benefit-2

- Reducing the TCO with the several additional functions
 - ✓ Approval sign / Sign Alarm / Notice
 - ✓ @mail / Fax Deliver
 - ✓ Secure PDF policy & generator, PDF conversion, e-Book tool & viewer
 - ✓ Originality with TimeStamp & PKI Cetification, Tamper Detection
 - ✓ Video-meeting Collaboration with Doc & Browser Sharing / Whiteboard

- Hybrid Cloud ECM structure
 - ✓ Private Cloud for Contents Storage in house of company
 - ✓ Public Cloud Connection for Contents Deliver

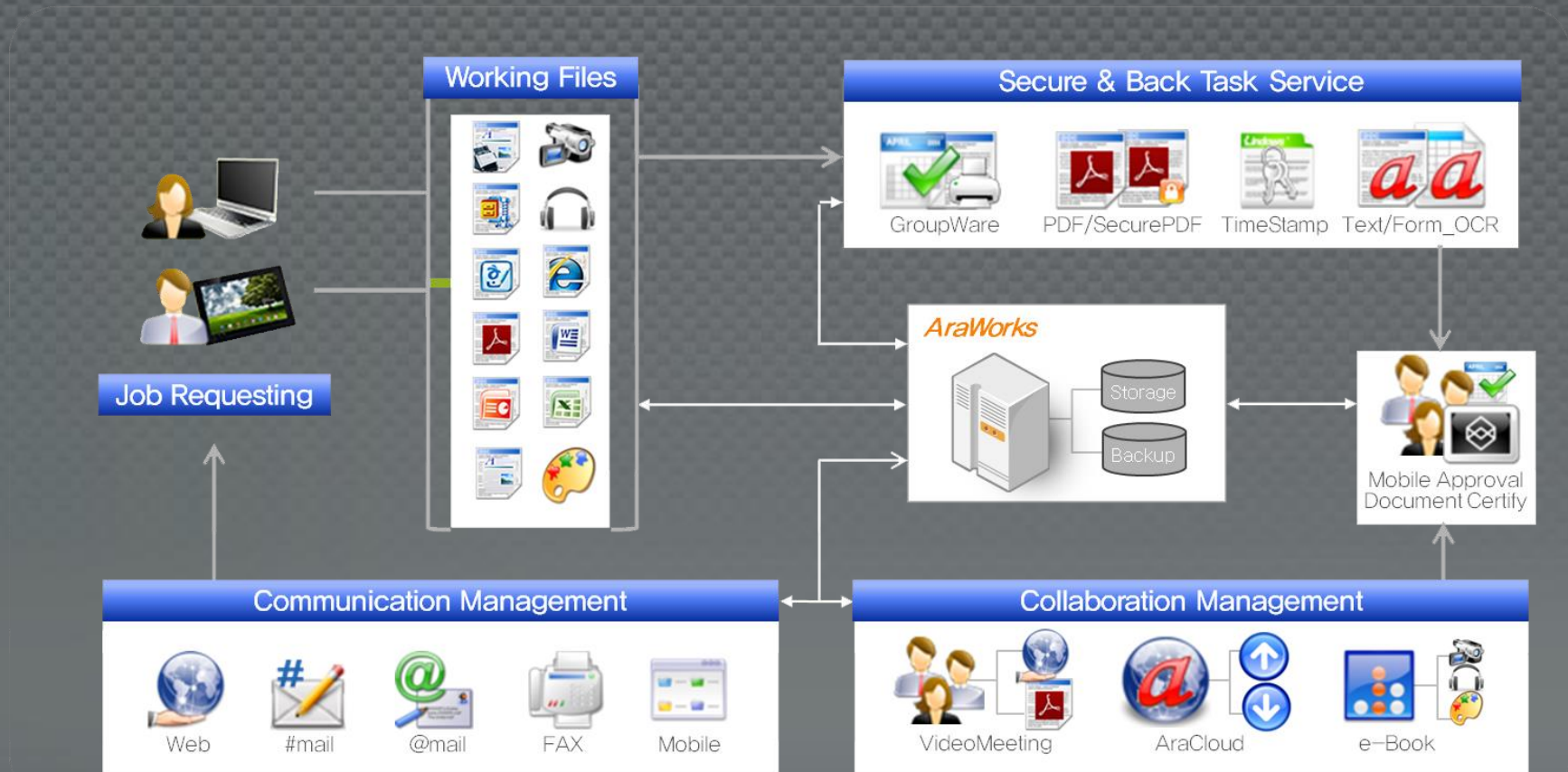


Our Key Technology

- HighSpeed DB design - MetaData setting & auto file DB related technology
- Secure PDF generation in server base – Print/FormFill/Annotation/Editing/
Extract permit/prohibit & User-PW / Owner-PW
- Originality & Tamper Detection – Hash / TimeStamp / PKI
- File encryption / decryption
- High compress PDF conversion – over 80% compress
- Storage Save & Reduce (Data Duplication Reduction) technology
 - Data Recovery & File History Management
 - HTML5 based Web-RTC & Sharing Whiteboard
 - e-Book generation tool & mobile view



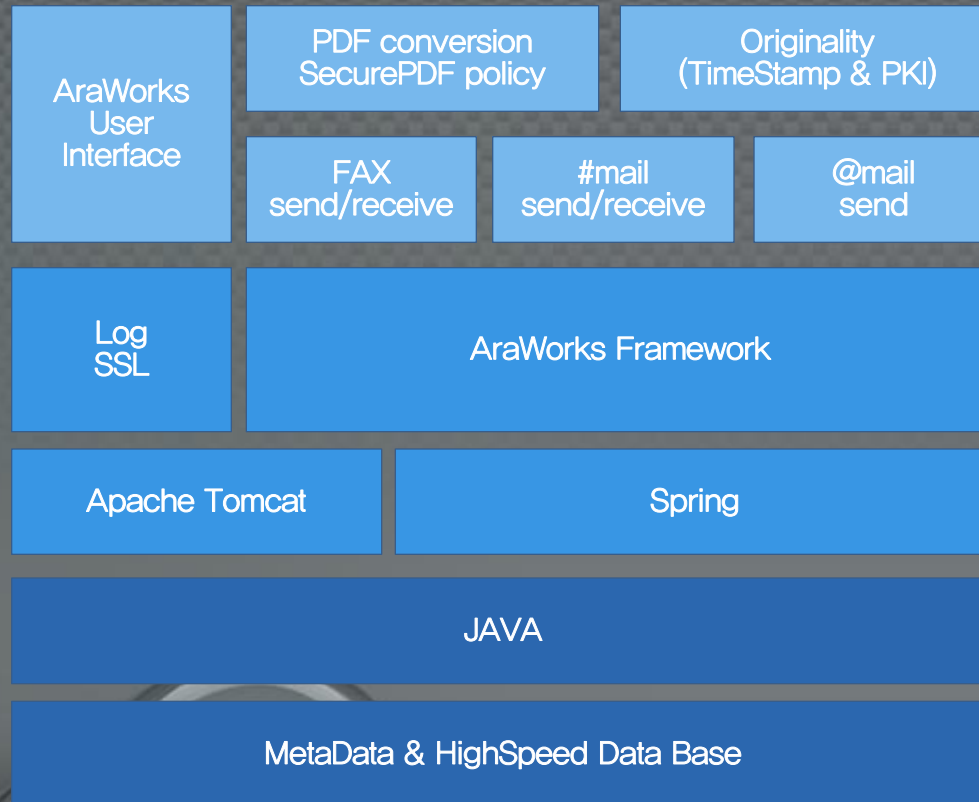
AraWorks Configuration



- #mail : Korea Registered e-Mail, like as the De-mail/Germany, DigitalMailBox/Austria, PReM/Italy, USPS_EPM/US, IncaMail/Swiss



AraWorks Architecture & Components

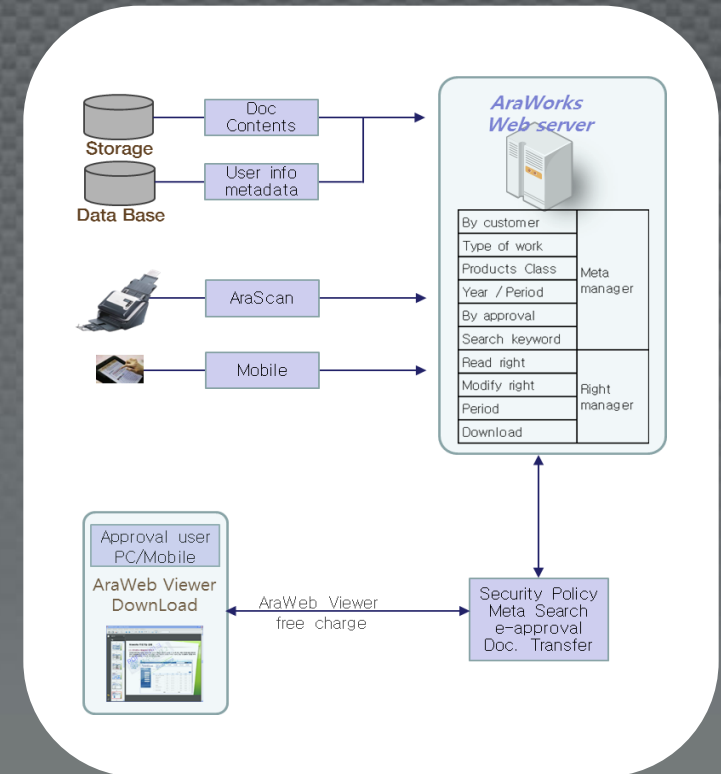


Service	Open Source	Version
Core	Spring Framework	3.0.5
Server Security	Spring Security	2.0.4
Ajax Support	Ajax Tags	1.5.5
Data Access	iBatis SQL Maps	2.3.4
ORM	Hibernate	3.4
Cache	EHCache	2.3.4
Scheduling	Quartz	1.8.5
Compress	Common Compress	1.1
Mail	Common Email	1.2
XML Manipulation	Xerces 2	2.10.1
	JDOM	1.1.1
FTP	Commons Net	3.0.1
Process Control	Spring Web Flow	2.0.5
Excel	jXLS	0.9.9
Object Pooling	Commons Pool	1.5.6



AraWorks' Application Field

- Content Centric Applications
- Case Management
- Contract Management
- Content Centric – Workflow / BPM
- Corporate Collaboration
- Loan Application Processing
- Marketing Material
- Secure PDF Policy Server Application
- Mobile Form Application Processing



- Scanning / Sorting / BookMark-PDF Generation
- OCR / BCR / Receipt & Logistic Processing
- 100's of Others



AraWorks Language Support

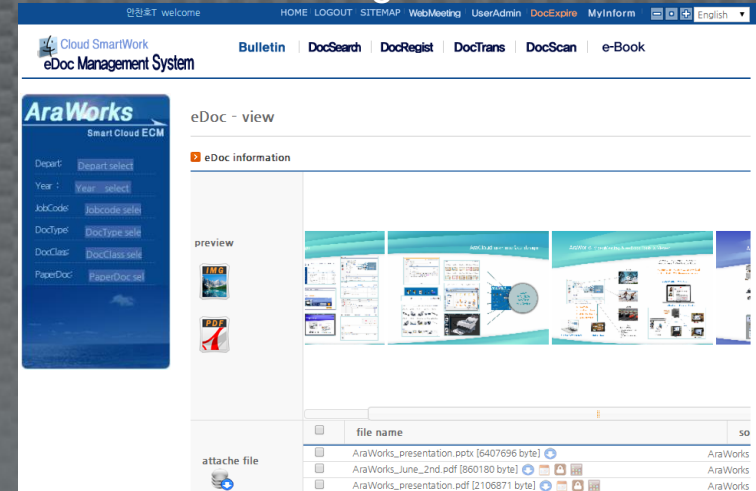
Chinese



The screenshot shows the Chinese version of the AraWorks eDoc Management System. The top navigation bar includes links for HOME, LOGOUT, SITEMAP, 视频会议 (Video Conference), 使用者管理 (User Management), 文件搜寻 (File Search), and 修改我的信息 (Modify My Information). The main header displays 'Cloud SmartWork 电子文件管理系统' and a secondary navigation bar with Bulletin, DocSearch, DocRegister, DocTrans, DocScan, and e-Book. The left sidebar contains a vertical menu for document management actions like 创建部门 (Create Department), 创建档案 (Create Archive), etc. The main content area is titled '电子文件 - 浏览' (Electronic Documents - Browse) and shows a preview of a document with a table of attached files at the bottom.

文件名	出处
AraWorks_presentation.pptx [6407696 byte]	AraWorks
AraWorks_june_2nd.pdf [860180 byte]	AraWorks
AraWorks_presentation.pdf [2106871 byte]	AraWorks

English



The screenshot shows the English version of the AraWorks eDoc Management System. The top navigation bar includes links for HOME, LOGOUT, SITEMAP, WebMeeting, UserAdmin, DocExplore, MyInform, and English. The main header displays 'Cloud SmartWork eDoc Management System' and a secondary navigation bar with Bulletin, DocSearch, DocRegister, DocTrans, DocScan, and e-Book. The left sidebar contains a vertical menu for document management actions like Depart select, Year select, etc. The main content area is titled 'eDoc - view' and shows a preview of a document with a table of attached files at the bottom.

file name	Size	Source
AraWorks_presentation.pptx [6407696 byte]		AraWorks
AraWorks_june_2nd.pdf [860180 byte]		AraWorks
AraWorks_presentation.pdf [2106871 byte]		AraWorks

Japanese



The screenshot shows the Japanese version of the AraWorks eDoc Management System. The top navigation bar includes links for HOME, LOGOUT, SITEMAP, WebMeeting, UserAdmin, DocExplore, 内覧/保守 (View/Maintenance), and 日本語 (Japanese). The main header displays 'Cloud SmartWork eDoc Management System' and a secondary navigation bar with Bulletin, DocSearch, DocRegister, DocTrans, DocScan, and e-Book. The left sidebar contains a vertical menu for document management actions like 作成部署 (Create Department), 作成年度 (Create Year), etc. The main content area is titled '電子文書 - 文書読み' (Electronic Documents - Document Reading) and shows a preview of a document with a table of attached files at the bottom.

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AraWorks_presentation.pptx [6407696 byte]	AraWorks
AraWorks_june_2nd.pdf [860180 byte]	AraWorks
AraWorks_presentation.pdf [2106871 byte]	AraWorks

Korean



The screenshot shows the Korean version of the AraWorks eDoc Management System. The top navigation bar includes links for HOME, LOGOUT, SITEMAP, 화상회의 (Video Conference), 사용자관리 (User Management), 문서보기 (Document View), 내정보수정 (Modify My Information), and 한국어 (Korean). The main header displays '클라우드 스마트워크 전자문서관리시스템' and a secondary navigation bar with 알림마당 (Notice), 문서조회 (Document Search), 문서등록 (Document Registration), 문서유통 (Document Distribution), 문서스캔 (Document Scan), and e-Book. The left sidebar contains a vertical menu for document management actions like 작성부서 (Create Department), 작성년도 (Create Year), etc. The main content area is titled '전자문서 - 문서보기' (Electronic Documents - Document View) and shows a preview of a document with a table of attached files at the bottom.

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AraWorks Potential Market Size

- Estimated Potential Market Size (Target : 50~200 employee Company)

Year	2014	2015	2016	2017	2018
Size	300M\$	600M\$	1.2B\$	2.0B\$	3.1B\$
Sales Price	@U\$30K	@U\$25K	@U\$20K	@U\$16K	@U\$13K

- Target SMB Field : Manufacturing, IT/SW/Science, Finance/Property, Education/Culture
- Y2018's Estimated Sales Price → @U\$13K
- Y2018's Market Volumn → 3.1B\$ (238,000 system X @U\$13K = 3.1 Billion-US\$)
- ✓ China Total Target SMB : 4,058,714 → 5% Potential Market : 200,000 corporations
 - ✓ Korea Total Target SMB : 256,777 → 15% Potential Market : 38,000 corporations

※ National Statistical Yearbook (Y2013)
 ▶ Below 500 employee
 ▶ It is not included the private company.



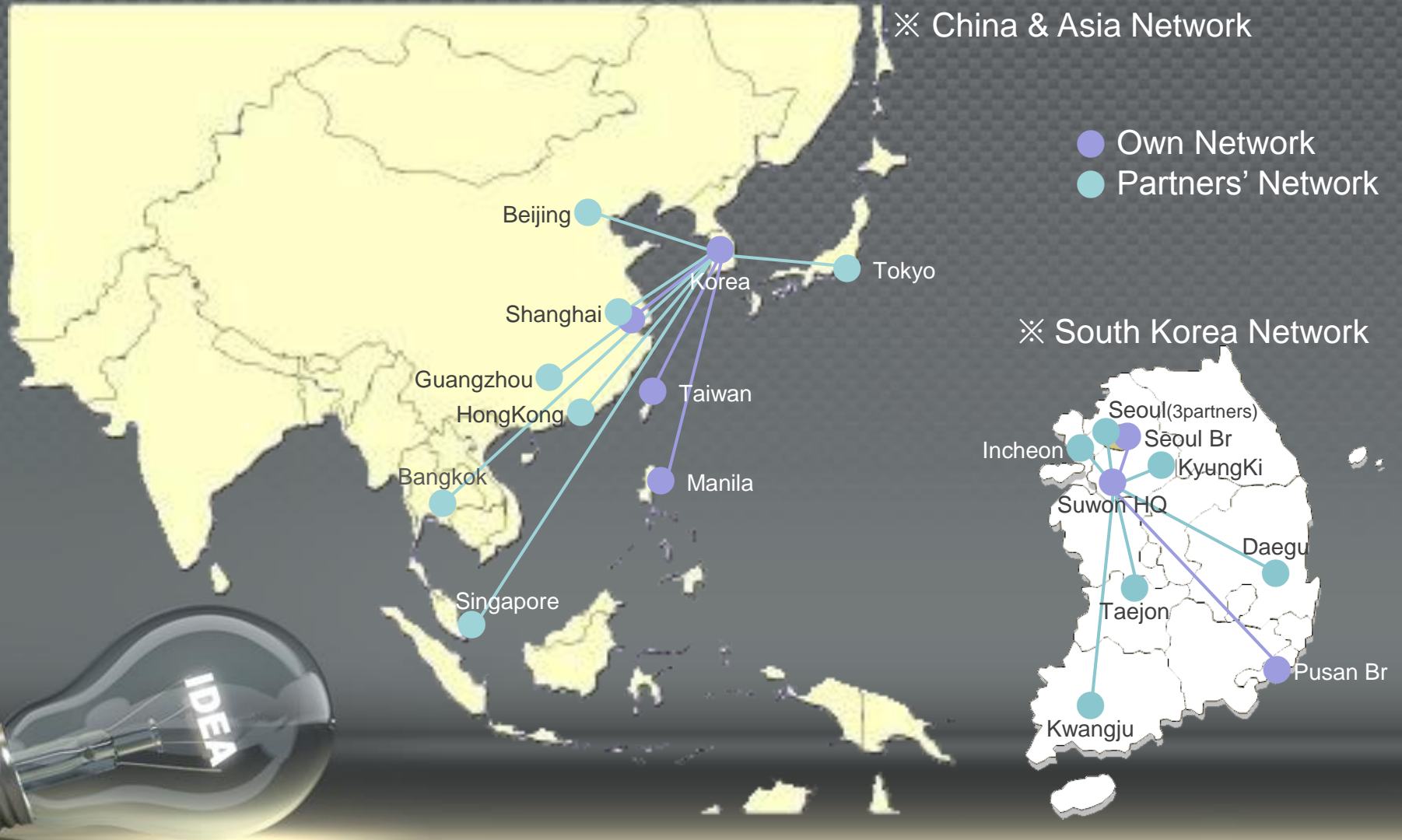
※ China's SMB Company

Total Target SMB	4,058,714
Manufacturing	2,380,759
IT/SW/Science	570,601
Finance/Property	424,271
Education/Culture	683,083
Service	1,010,731
Whole/Retail Sale	2,630,690
Public/Society	1,393,957
Others	1,522,438
Total SMB Corporation	10,616,530

※ Korea's SMB Company

Total Target SMB	256,777
Manufacturing	197,531
IT/SW/Science	14,213
Finance/Property	29,140
Education/Culture	15,893
Service	104,389
Whole/Retail Sale	168,570
Public/Society	25,106
Others	142,496
Total SMB Corporation	697,338

AraWorks Possible Marketting Networks



AraWorks Current TOWS Analysis

Threats	Opportunities
<ul style="list-style-type: none"> ▪ Unstable Company Financial Status ▪ Need Funding Cycle for Marketing ▪ Passive Investment of SMB Company 	<ul style="list-style-type: none"> ● Worldwide Papreless / GreenEnergy Trend ● Trend Change to Mobile Cloud Environment ● SMB's Strong Requirement for the Mobile Smartwork & the Cost Effective Solution
Weakness	Strength
<ul style="list-style-type: none"> ▪ Lower Brand Power than Leading Company ▪ Weak Sales & Marketing Organization ▪ Weak Customizing Support Team 	<ul style="list-style-type: none"> ● Our Own Core Technology ● Cooperation of the Global Partners for Technical & Marketting ● Hybrid Cloud System with Private Cloud Storage & HTML5 Browser Base Solution

✓ How we can overcome for the Threats & Weakness ?



- ① Most Cost Effective Product for SMB Company
- ② Over 50% Cheaper than Leading Companies, by Linux Open Source Policy & Server/Storage Integral H/W
- ③ The Continuous Promote & Support for the Regional & the Suitable Business Type Partners
- ④ Success Financial Funding → Invest to the Sales & Marketing Organization
- ⑤ Success Financial Funding → Invest to the Customizing Support Team

AraWorks Financing Purpose

- Investment Expectation : 3.0 ~ 5.0 million US\$
 - ① 2.0 million US\$ for 10~15 Sales/Marketing Organization Operation Cost & 10~15 Customizing Support Team Operation Cost
 - ② 1.0 million US\$ for Advertising & Promotion Expense in Korea & China Market
 - ③ 2.0 million US\$ for ASP System Investment in Korea & China Market
- Duration Time : 3 years
- Exit Strategy
 - ① Achieve the Global Competitiveness
 - ② Expand the Technical Leadership & Worldwide Sales Network
 - ③ IPO Opportunity in 3 years
 - Korea or China/US Market, - Value : 5 Billion US\$
- Return Estimation
 - ① Invest 5 million U\$, Own 30% Share
 - ② After IPO, then return 1.5 Billion US\$
 - ③ 300 Times Return Value during 3years investment



AraWorks ASP Business Plan

- ASP Business Target : below 50 employee company & private company
- Users → no H/W & S/W investment, only the running cost budget enough
- Cloud Center → Big System Investment for the ASP service in DataCenter

1 st Year Cloud Center Investment	2.0 million U\$	Location → Seoul, Beijing, Shanghai, HongKong 4 CloudCenter X U\$500K = U\$2.0 million
2 nd Year Return Value	1.44 million U\$	1 user fee = U\$10 per month, 30GB 1 user fee = U\$ 120 per year 1 CloudCenter = 3,000 users 4 CloudCenter X 3,000users X U\$120 = U\$1.44 million
3 rd Year Return Value	2.9 million U\$	1 user fee = U\$10 per month, 30GB 1 user fee = U\$ 120 per year 1 CloudCenter = 6,000 users 4 CloudCenter X 6,000users X U\$120 = U\$2.9 million

※ **CloudCenter Storage** : Flash Array Storage Using for ①High Speed Data Service, ②Cloud Monitoring for Maintain, ③Genericize in same storage, ④Reliability & Scalability by our own technology (DataEncryption&Compress/ NoDuplication/Data Recovery/Originality etc.)



AraWorks Team <Key Members>



BC Choi / President & CEO

SamSung Group R&D Center
Graduate SamSung University



CH Ahn / CTO

MorningIT CEO / LG Group R&D Center
Graduate Electronic / Korea University



Dr. JS Kim / Software Adviser

Professor of Computer Science
ChoongBook National University



Dr. JI Lee / Network Adviser

Network System & SW Super Consultant
Graduate Computer Science / Korea Univ.



JH Ko / Software Director

Sundo Education S/W CEO
Graduate Electronic Business / Busan Univ.



WJ Moon / Software Leader

Crediff S/W CTO, Java Specialist
MarkAny DRM Developer Team Leader



KM Park / C++ Specialist

MorningIT CTO
Japan EasySoft Client App Developer



KG Kang / PHP-CSS Specialist

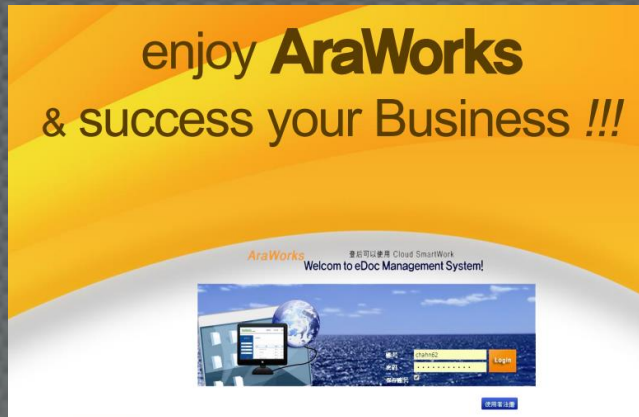
Sundo Education S/W Team Leader
Computer Science S/W Manager



Zhao Long / Java Specialist

Crediff S/W Web Developer Manager
LG-China S/W Developer, KoreanChinese





Please refer to the
“AraWorks_presentation”
material sheet for the more
detail functions & architecture.



Thanks a lot !