MAPUS⊘FT®

INTER-OPERABILITY MADE EASY

MapuSoft is the global leader in software interoperability & reusability solutions that provide freedom, protection and stability to embedded applications

AGENDA

- Introduction
- Ada Changer Overview
- Ada Changer Architecture
- Partial list of Customers
- Sample Ada Conversion
- Question & Answers

- Slides 9 – 13 provided for information only

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Ada-Changer

Automated Conversion of Ada Code to Other Programming Languages

Ada-Changer is the most reliable and powerful Ada language conversion solution on the market. With its Modeling and Re-factoring capability, Ada-Changer not only modernizes the code by converting it to a modern language but also improves the code. Having been developed and tuned by scientists with over 40 years of modernization experience, Ada to C/C++/Java/C# Changer significantly reduces the cost and risk for any Ada modernization project

Ada-C/C++
CHANGER®
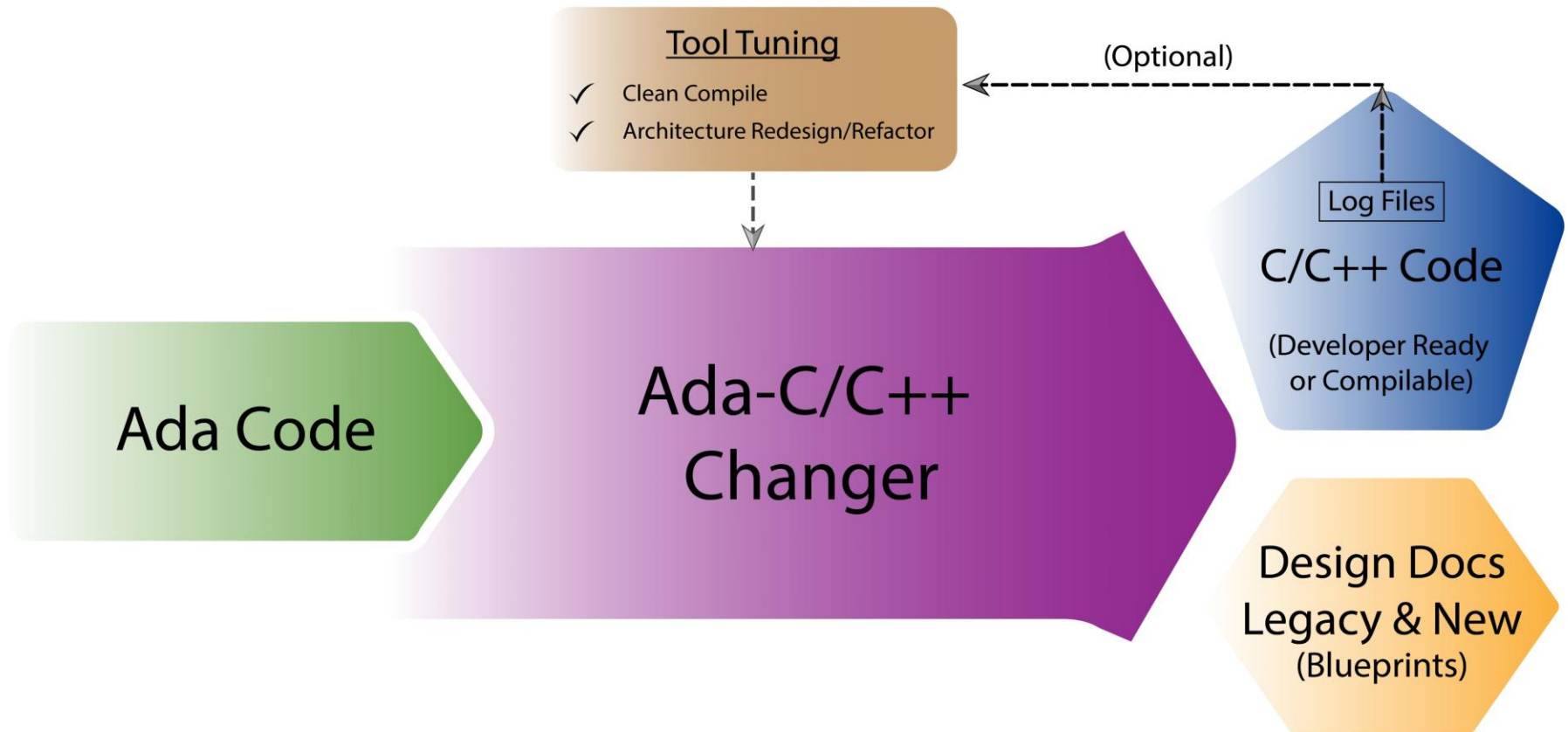
Automated Conversion of Ada Code to C/C++

Ada-Java
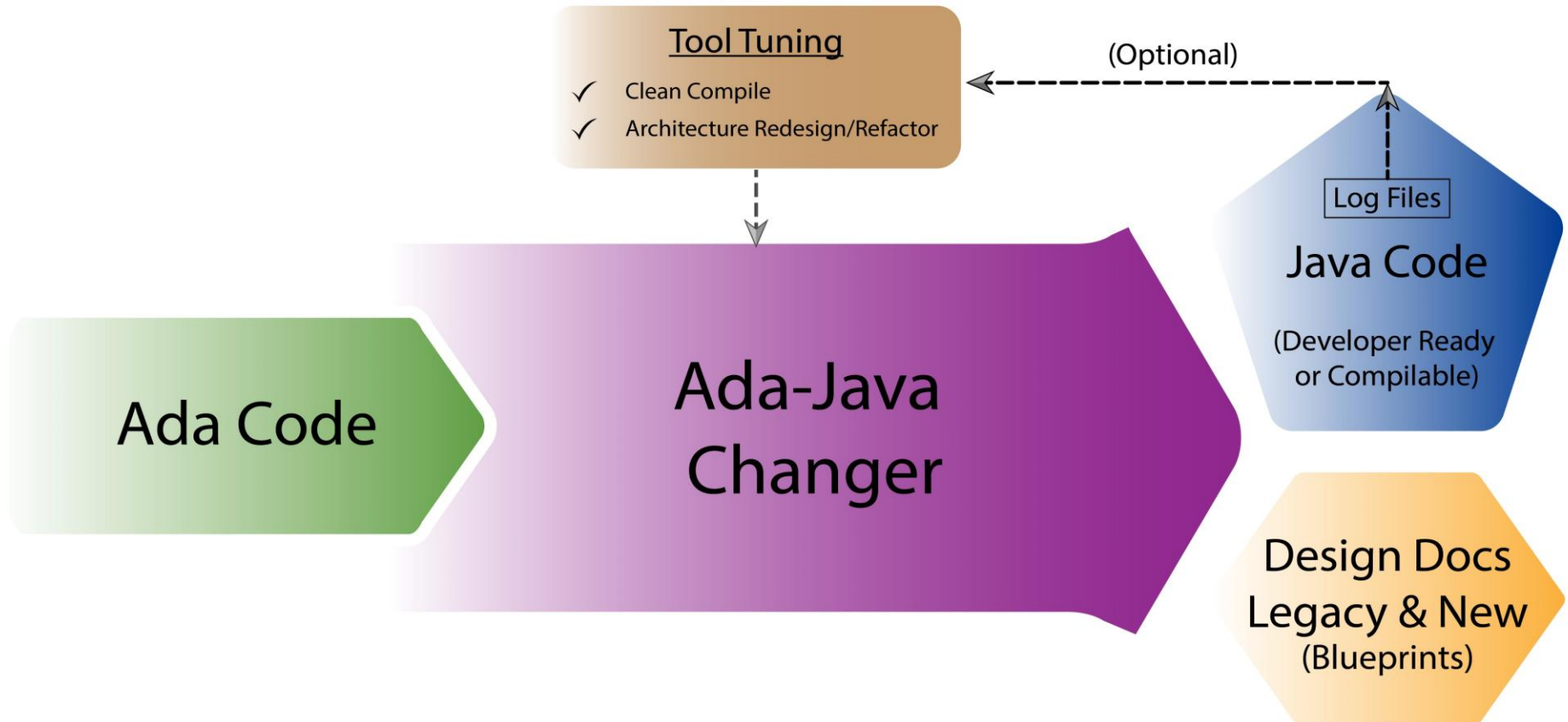### CHANGER®

Automated Conversion of Ada Code to Java

Ada-C#
CHANGER®

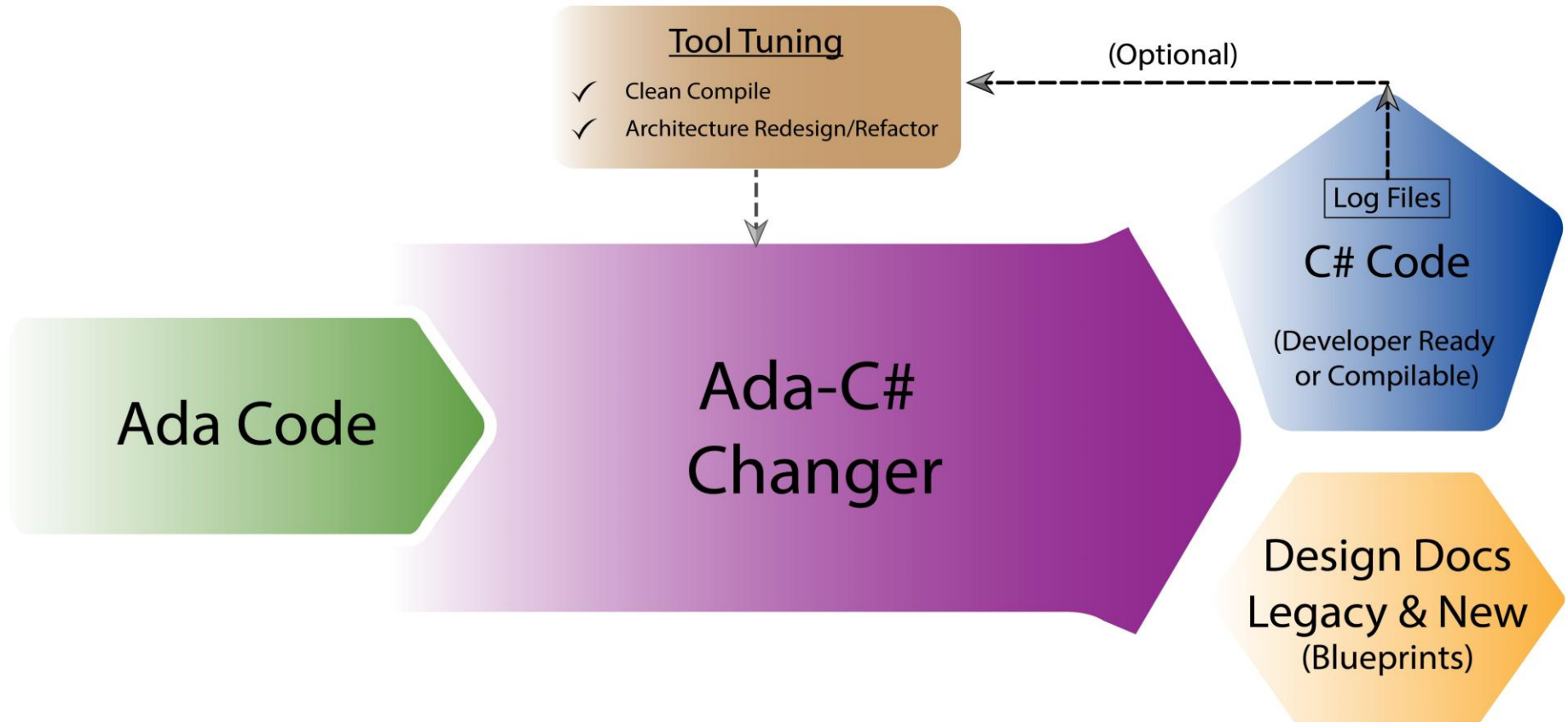**Automated Conversion of Ada Code to C#**

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Ada-C#
CHANGER®

Tool Tuning
✓ Clean Compile
✓ Architecture Redesign/Refactor

(Optional)

Log Files

C# Code

(Developer Ready
or Compilable)

Ada Code

Ada-C#
Changer

Design Docs
Legacy & New
(Blueprints)

Model-Based Rule-Driven Conversion Framework

AST: *Abstract Syntax Tree*
IOM: *Intermediate Object Model*
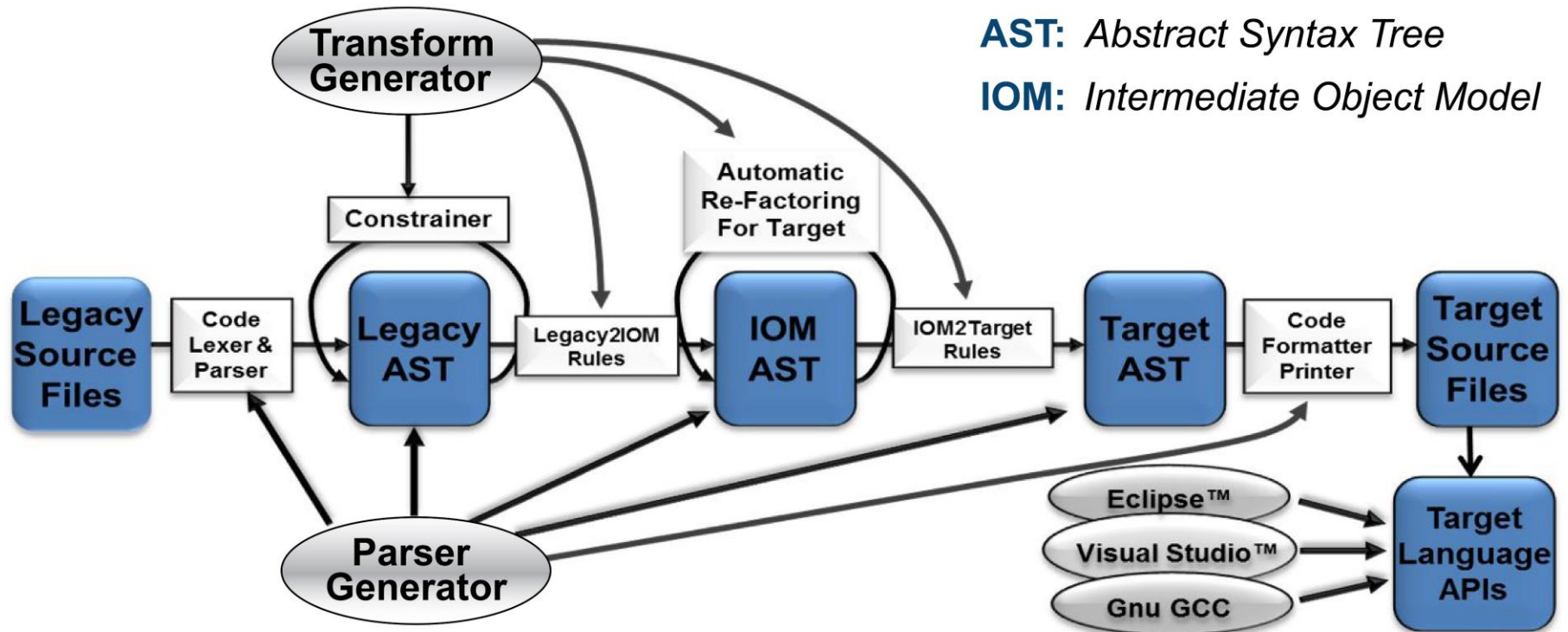
A Sampling of Past Ada Projects

Over 150+ Automated Modernization Projects since 2000 - 100% Customer Satisfaction

System	Source(s)	Target(s)	SLOC	TTC
TOPSKY – Air Traffic Management – French Version	Ada	Java & C++	495k	12 Months
TOPSKY – Air Traffic Management – Nordic Version	Ada	Java & C++	541k	9 Months
TOPSKY – Air Traffic Management – Australian Version	Ada	Java & C++	638k	9 Months
Variable Message Format Test Tool	Ada	C++	77k	3 Months
Naval Undersea Warfare Center Weapons Control System (WCS)	Ada	C++	800k	7 Months
SAC Strategic Planning System	Ada	C++	40k	2 Months
E-2C Hawkeye Aircraft Mission Fault Isolation Program (MFIP)	Ada	C++	20k	5 Months
Navy Multi-band Terminal (NMT)	Ada	C++	89k	5 Months
Canadian Armed Forces Crypto Material Management System (CMMS)	Ada	C#	20k	4 Months
COBRA DANE Radar Calibration System (SCRS) of Ballistic Missile Early Warning System (BMEWS)	Ada	Java & C++	380k	8 Months
P-3C Orion Aircraft Acoustic Signal Processor System (ASP)	Ada	C++	500k	14 Months
Global Positioning Navigation and Timing Systems (GPNTS)	Ada	C++	221k	8 Months
Aegis ACB-08 Product Line Architecture (Analysis Only)	Ada	C++	1M	1 Month
Advanced Field Artillery Tactical Data System (AFATDS)	Ada	Java	5.5M	9 Months
Hundreds of Other Successful Projects Completed	32+ Source Languages	11+ Targets	1+ Billion	< 12 months

Automated Modernization of Information Systems

Why use Ada-Changer Instead of Manually Rewriting?

- Conversion with Ada-Changer is completed much faster than manual conversion, meaning the product can be deployed without many years of delay

- Ada-Changer can handle large applications with multi-millions of LOC

- Our technical support team has expertise in Ada, C/C++, target tools and OS platforms

- Eliminate the need for a costly and tedious code re-write for extensive cost and time savings

Ada Conversion - Features

- Supports conversion of Ada 83 and Ada 95 to ANSI C++ 03

- Preserves Ada comments, files structures and variable names

- Converts Ada generics to C++ templates (most cases)

- Supports Ada tasking and rendezvous constructs

- Supports Calendar, System, Unchecked_Conversion, Record Representation Clauses, Variant Records, Declare Block Statements, Ada Tick Functions, Renames (for packages, variables, records, and types), "use" for packages and types, Ada Strings, access (including access all & procedure)

-

Add-on tool features and re-factoring services

- Generate design documents of existing & new code

- Transform Database and User-Interface implementation

- Remove dead or redundant code/data

- Merge and consolidate duplicate code/data

- Reorganize and improve design in new code/data

- Remove flaws in new code that originally existed in old

- Create reusable optimization/packaging/redistribution modules

- Integrate with modern parallel/multi processing and distributed/N-Tier operational environments

Add-on tool features and re-factoring services …

- Modernization of legacy systems to multi-tier architectures
- Modernization of flat file, hierarchical and legacy databases
- Modernization of legacy UI to web or other modern UI
- Re-factor to improve maintainability, security and performance
- Custom pattern-based changes
- Migration to modern cloud architectures
- Testing & integration support solutions
- Extraction of business rules from legacy systems

Secured Facilities and Personnel

- ## Secure Room and Server Facilities
  - Cleared facility and servers for use on classified/secret code
  - Sensitive Compartmented Information Facility (SCIF)

- ## Cleared Staff
  - Staff maintains active security clearances which are reviewed periodically
  - Over 20 years of modernization experience with highly sensitive code
  - Completed large projects for US and Foreign Governments

- ## Procedural FSO
  - Employ an FSO with secure code handling procedure