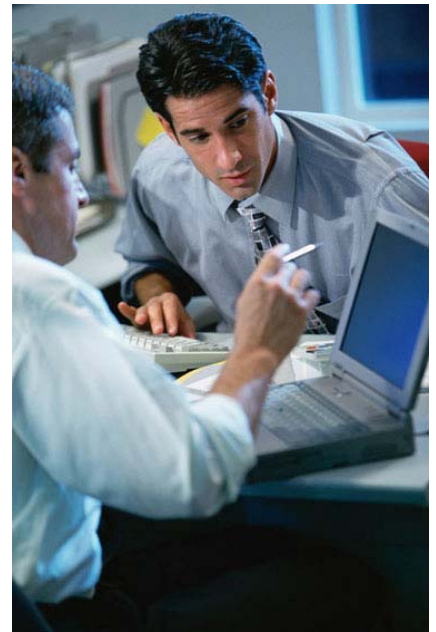


## Setting the Standard in Application Transformation

Metex has become a leader in the transformation of legacy languages (VB, Centura, PowerBuilder, Oracle Forms, Delphi and C/C++) to current multi-tier architectures in Java or .NET. The Metex Transformation Solution has the proven track record in transforming legacy applications of any size or complexity into pure native style Java or .NET code.

### Application Transformation

Application Transformation uses a combination of specialized skills and sophisticated technologies to transform legacy code into high quality, easily supported business systems on a strategic platform.

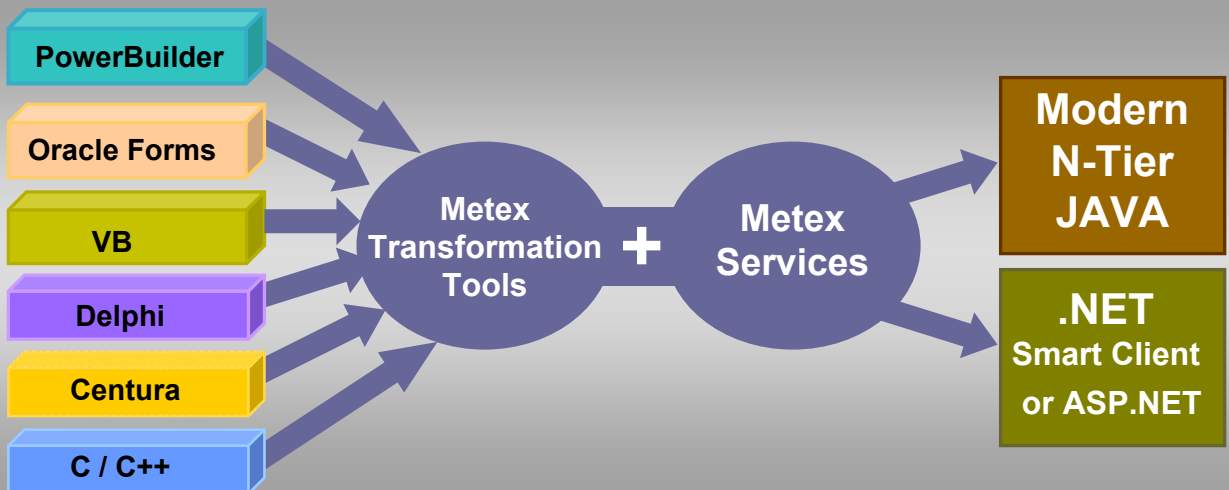


*“Maintaining excellent code quality is standard during a Metex Application Transformation.”*

### Why Metex is the Vendor of Choice for Transformation?

- Supports industry standard architectures
- Architectural re-engineering to multi-tier
- Ability to comply with a customer’s specific code standards
- Natural Java / .NET code for easy maintenance
- Leading software transformation tools
- Expertise in source code mining
- Proven processes that are well documented
- A large team of experienced specialists

### Legacy Application Transformation into Java / .NET



*“The best way to transform your legacy and client server applications to the modern multi-tier architectures of Java or .NET, quickly, accurately and cost effectively while protecting your investment in functionality.”*

## Application Transformation Rather Than Code Conversion

Metex is in the application transformation business and does not compete with code migration or conversion companies. There are vendors that use automated code conversion techniques to create inferior quality code in Java or .NET and their methodology is to duplicate the structure of the existing legacy application in Java or .NET. The Metex approach is to take legacy client server applications and transform them into modern J2EE or .NET applications with a multi-tier architecture. The true competition for Metex is a potential customer's in-house development team.

## Issues to Consider in the Legacy to Java / .NET Options

The following chart reviews the key issues with the various options to take legacy applications to Java or .NET. The manual project has the highest cost and high code quality but also has a high risk due to the very long time duration of the project. Applications that go through a "code conversion" are generally done several years after the initial project as the code is generally difficult to maintain.

Project Type	Issues	Cost
<b>Manual Project</b>	<ul style="list-style-type: none"><li>▪ Long Project Duration</li><li>▪ High code quality</li><li>▪ High Risk</li></ul>	<ul style="list-style-type: none"><li>▪ Very High Cost</li><li>▪ Cost is not always accounted in full for in house projects</li></ul>
<b>Application Transformation The Metex Solution</b>	<ul style="list-style-type: none"><li>▪ Project duration time generally 1/4<sup>th</sup> of a manual migration</li><li>▪ High code quality</li></ul>	<ul style="list-style-type: none"><li>▪ Medium Cost</li><li>▪ Reduced Long Term Maintenance</li></ul>
<b>Conversion (Migration)</b>	<ul style="list-style-type: none"><li>▪ Limited to taking Client Server Legacy to Client Server Java /.NET</li><li>▪ Code appears to be Legacy in Java/.NET</li></ul>	<ul style="list-style-type: none"><li>▪ Medium/Low Cost</li><li>▪ But high code maintenance cost</li></ul>
<b>Syntax Translation</b>	<ul style="list-style-type: none"><li>▪ Should not be used for 4GLs</li><li>▪ Intended for simple 3GL to 3GL</li></ul>	<ul style="list-style-type: none"><li>▪ Very Low Cost</li><li>▪ No value for 4GLs or larger applications</li></ul>

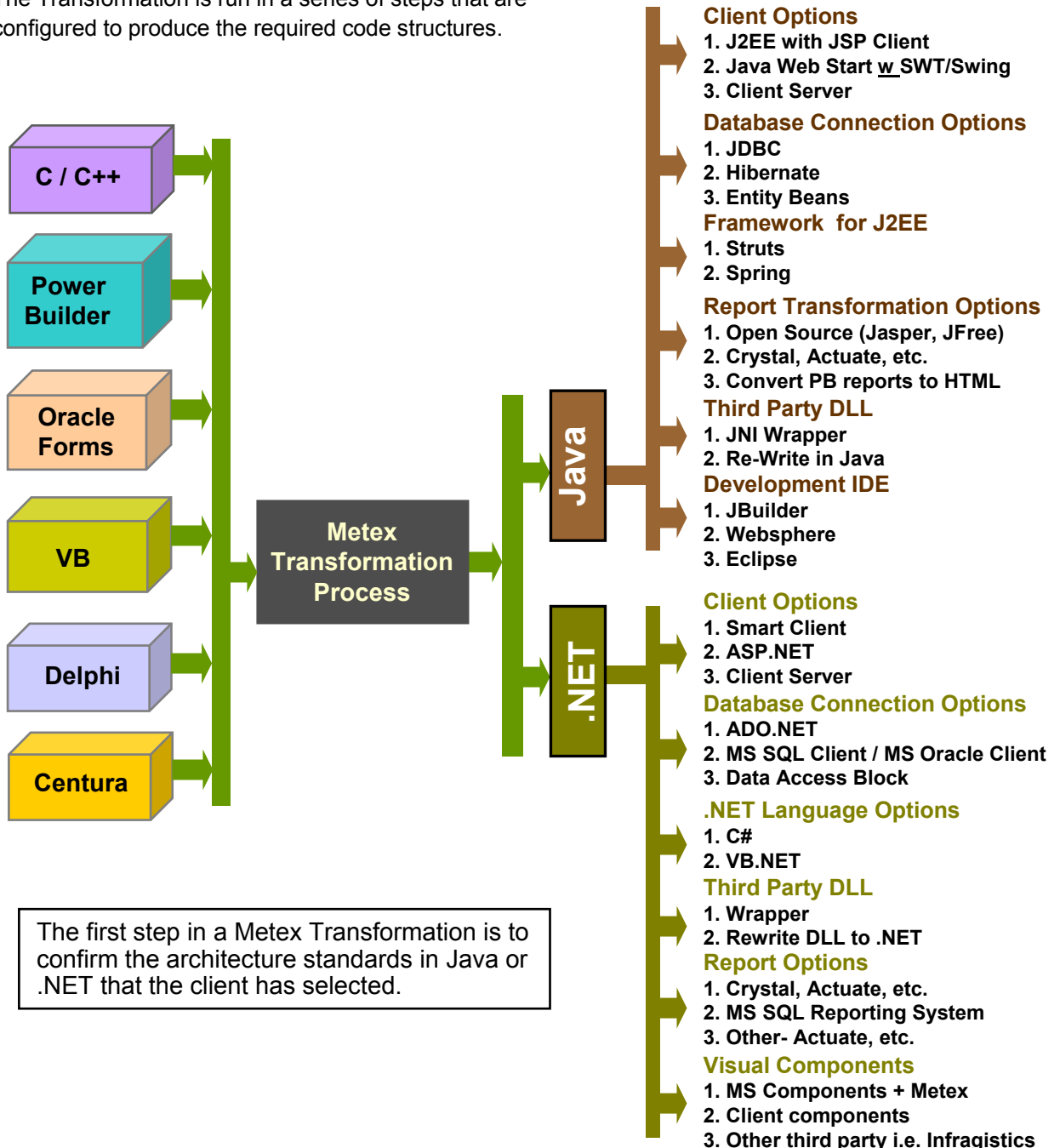
### Principles of Automated Application Transformation

1. Client must be able to select application architecture
2. Multiple automation for tools for different tasks  
*Different tools selected as per the architecture selected by the customer*
3. Code created via automation must be native and "current" style and structure of code  
*Code must not appear to be 4GL style code in J2EE or .NET*
4. Client must be able to maintain control of the required output  
*Detailed application project plan mutually agreed*
5. Do not introduce any libraries where client does not have the source code.

***"Metex is in the business of application transformation rather than code migration."***

## Target Language Architecture Selection

The first step in a Metex Application Transformation is to confirm the architecture standards in Java or .NET that the customer has selected. There are a range of decisions that must be made in determining the optimal architecture selection in both target language options. Some organizations have clearly defined corporate standards for all applications in Java or .NET, while other organizations may request information from Metex to clarify the pros and cons of the various code architecture options. The Metex Transformation process uses a variety of automated tools to convert the majority of the Legacy code into Java or .NET, but the automated portion of The Transformation is run in a series of steps that are configured to produce the required code structures.



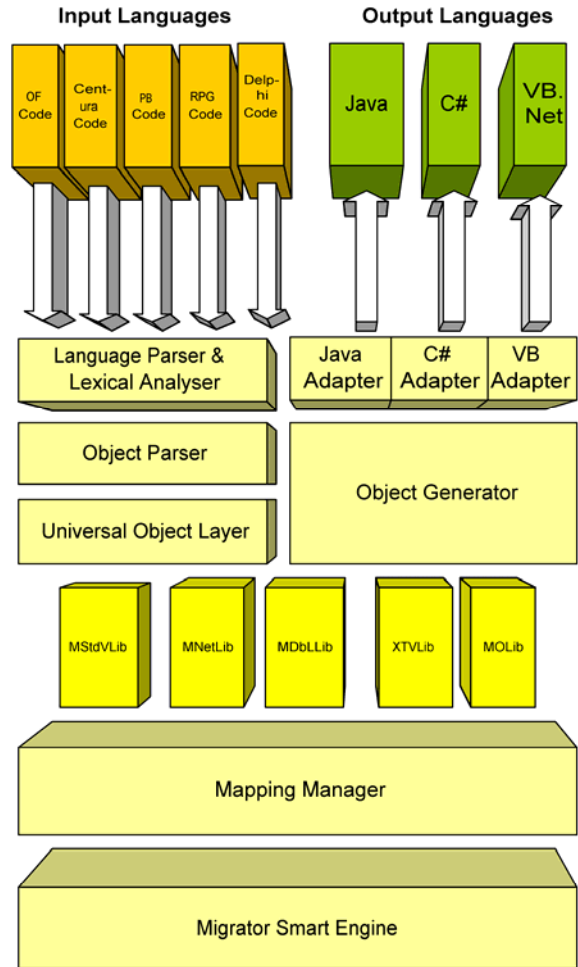
The first step in a Metex Transformation is to confirm the architecture standards in Java or .NET that the client has selected.

# Transformation – Automation without Any Compromise on Code Quality

Metex in fact does use automated tools to convert the majority of the code in legacy application into Java or .NET. The automated portion of a Metex application transformation does take several weeks and is configured to match the unique architecture options that the customer has selected. In the conversion or migration process provided by other vendors, automated tools are run quickly in a one time pass of the Legacy code and always create the same format output code. The conversion tools (much like a sausage machine) create code in the same format regardless of the input and generally have the characteristics of the legacy language now inside of Java or .NET.

## How Does The Metex Transformation Engine Work?

At the core of our transformation services is the next generation of automated tools, the Metex Transformation Engine. This is a multi-layered, object-oriented technology that automatically reproduces the framework of objects in the original application and translates the original application's functionality into Java or .NET. The revolutionary Metex Code Transformation Technology is based on advanced artificial intelligence research and produces native code that is easy to work with for future maintenance, support and upgrades.



Metex Smart Engine Architecture

### INSIDE THE METEX TRANSFORMATION ENGINE

Here's what happens inside the Metex Transformation code engine

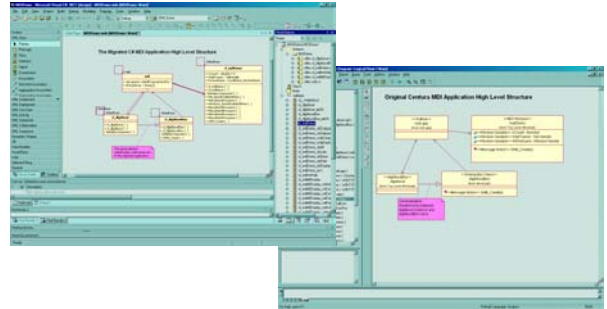
- 1. Code loaded into Metex Code Engine**  
The source code of the original application is loaded as input.
- 2. Functionality of code identified**  
The functionality of the code is analyzed by the LPLA.
- 3. Object structure marked**  
The inheritances and relationships of the business logic framework is mapped.
- 4. Code converted to universal layer**  
The input code is converted to universal code to allow for interface to Metex Migrator libraries layer.
- 5. Functionality migrated to new language**  
The functions of the original language are mapped into native functions, datatypes, etc. Any remaining functions are migrated by Metex professional services.
- 6. Code reassembled into the new structure.**  
The object structures and inheritances marked in the Object Parser are re-assembled by the Object Generator.
- 7. Code output in new language**  
The new application is output in the new language, ready for our professional services team to begin their work on the Java or .NET code.

## Application Transformation and Technology

Application Transformation uses automated software tools, developed by people who understand both the old and the new technologies. Together with specialist services from qualified and experienced consultants, Application Transformation delivers fully-tested, working (and, where appropriate, enhanced) applications utilizing a five-stage approach.

### 1. Application Analysis

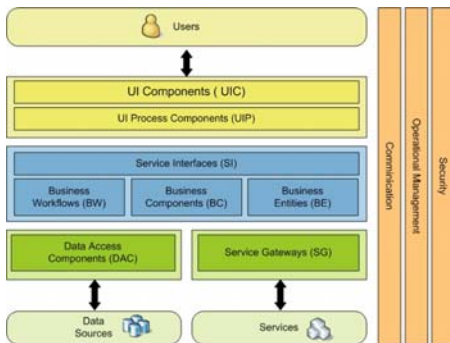
Detailed application analysis and Application Transformation project planning takes place after the client has confirmed the architecture requirements in the target language. The detailed application analysis will be used in both the automated transformation and the professional services phases of the code transformation project.



### 2. Sending Code Through the Metex Transformation Tool Suite

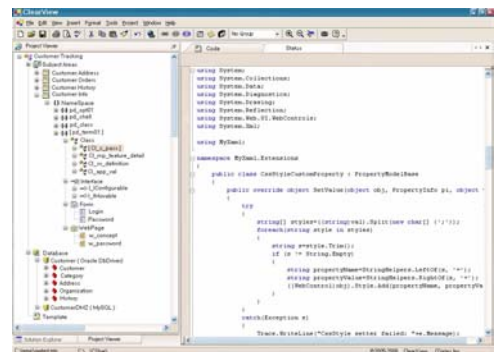
The process of sending code through the Metex Application Transformation technology is a complex multi-step process that takes a number of weeks of effort by senior architects. The process that Metex to run legacy code through the Transformation tools has never been a simple “double click” on the Transformation application and select an input file. The automated portion of the Application Transformation process is difficult because Metex is focused both on matching the

client’s architecture standards and producing a very high quality of code that will be used in the next phase by the Transformation professional services team.



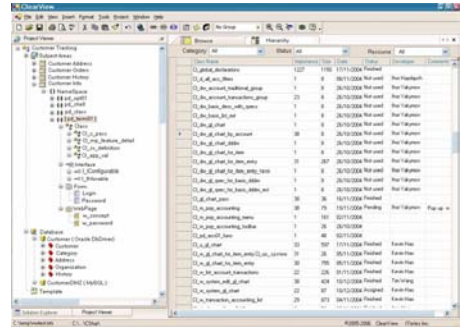
### 3. Transformation Professional Services

The Metex Professional Services Team takes the output from the Transformation Tool and completes any code that could not be converted by the Transformation automated tool suite. During this phase the Services Team extensively makes use of code mining and code analysis tools that have been developed by Metex to facilitate the accurate completion of the code. The Services Team works on the transformed code according to a specific roadmap that was Developed earlier in Phase 1.



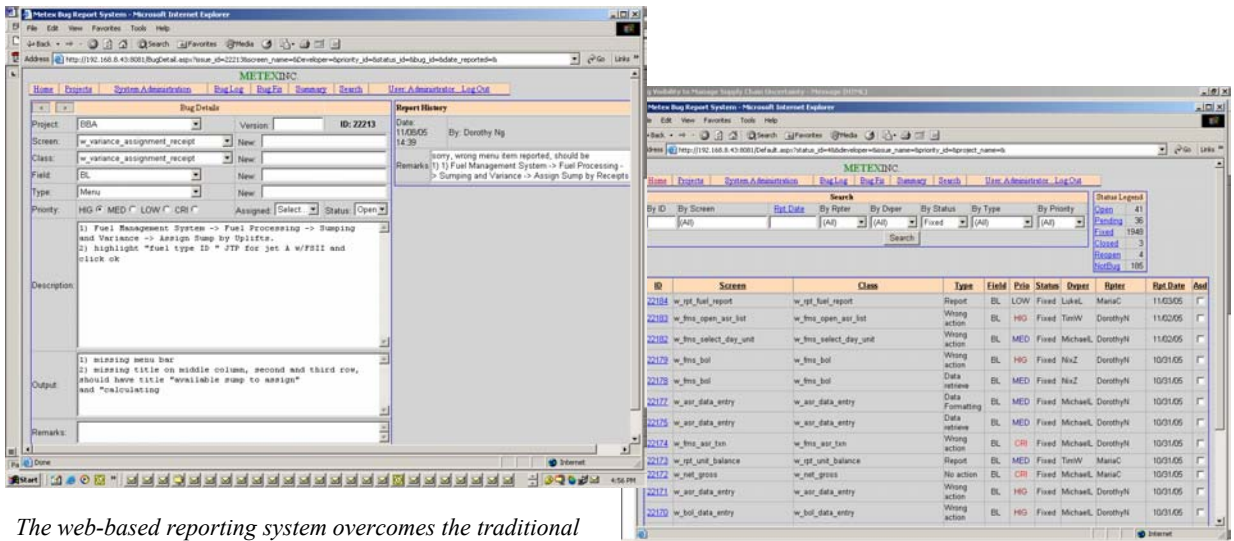
## 4. Unit and Functional Testing

Unit and Functional Testing is a very taxing phase that is supported by proven Quality Assurance and Quality Control procedures. Metex has its own testing methodology but also uses test cases that are provided by the client to verify that business logic has been correctly moved into the new architecture. The Metex testing team is independent from the Transformation Services group and they set a very high standard for code quality.



## 5. User Acceptance Testing

Working with the client on testing and debugging to deliver a finished application is the final step in the process. The client enters the bugs they find into a web-based bug reporting system and the Metex professional services team works on the bugs and updates the status as they are being worked on. The client and Metex both have web access to the same real-time status reports.



*The web-based reporting system overcomes the traditional communication problems in user testing by providing clear and timely information to project staff, ensuring that issues raised can be handled quickly and effectively.*

## Fixed Price Solution

The Transformation process with its rigorous project management and proven technology, provides a fixed price route from risk-laden, poorly supported code to a high quality, business focused solution.

“Metex worked closely with us. They understood our requirements and proposed the best way forward for our business.”

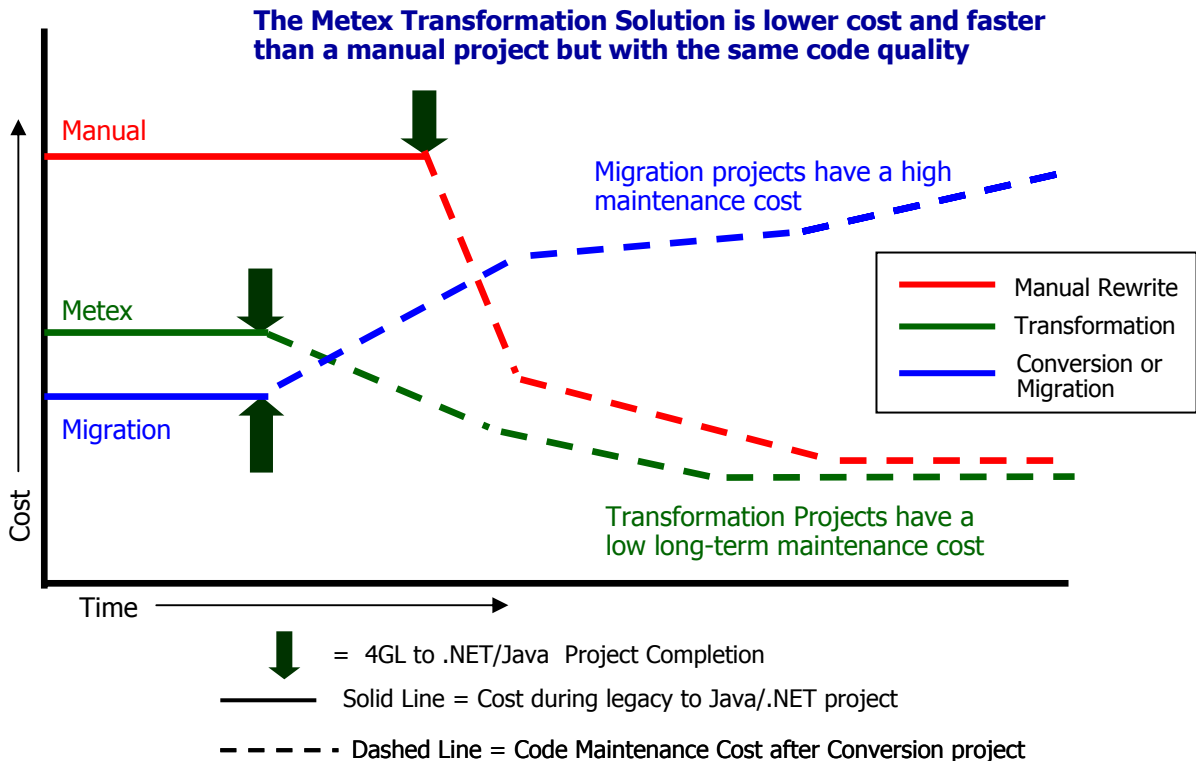
## The Future Of Business Software Development – .NET™ and Java™

The Gartner Group has reported that two platforms will dominate business-oriented application development efforts over the next five years: .NET and Java. This prediction certainly does not require a crystal ball and the reality is that, to a large extent, this growth in dominance is already happening. Between the two platforms, .NET and Java solutions are predicted to make up 90 percent or more of new business application development projects by 2006.

In fact, many companies have made the decision that for the development of business applications, any development language other than .NET or Java are “non-strategic”. The question then is how to protect the investment in legacy systems written in PowerBuilder, Centura, Delphi, RPG or Oracle Forms and bring these applications forward to be in line with the new world of application development. The Metex Application Transformation Solution is an option that provides a cost-effective yet high quality move to multi-tier J2EE and .NET in a fraction of the time of a manual project.

### Transformation – The Logical Choice in Application Modernization

The conversion or migration option has the lowest initial project cost of the three choices but it has the highest ongoing maintenance cost due to inferior code quality. The manual rewrite project has the longest duration and highest project cost. The Application Transformation has a slightly higher cost than a Conversion project but has low ongoing maintenance costs similar to the ongoing cost from a manual project. The high code quality from the Application Transformation basically defines that it is the only true alternative to an in-house rewrite.



**Transformation – High Code Quality with Shorter Duration and Lower Cost Than a Manual Project**

## Key Benefits of the Metex Transformation Solution

**Compliance to Client Specific Architecture Standards** – We transform legacy applications into the current standards in Java and .NET.

**Scalable Solution** – We manage very large projects by utilizing application analysis tools that track object inheritances and dependencies

**Faster than Manual** – up to 75% faster than a manual rewrite

**Accurate Transformation** – the Metex Transformation Solution delivers the most accurate migration of your application

**Technically Excellent Code** – Metex is focused on delivering the highest quality code

**Turnkey Solution** – you get code ready for user acceptance testing, minimizing the effort you require to modernize your applications



## Additional Services Available

**Report Transformation** – when moving to .NET or Java, reports need to be converted as well. Metex can convert your reports into a wide range of reporting solutions.

**Application re-engineering** – the ideal time to add the additional features or to change the application to reflect new business processes is in conjunction with an Application Transformation.

**Maintenance and support** – once we have become familiar with your applications during transformation, we are the ideal resource to offer application development services.

**Database upgrades** – the most efficient time to make database changes is during a move to a new language. Metex has a proven track record of database transitioning.

**Harness the power of the web** – Metex can provide application re-engineering that provides new functionality and uses of web capabilities.

## About Metex

Founded in 1989, Metex Inc. is a high-performance IT company with a long and enviable record of delivering projects on time, on budget, and on specification. Metex's approach represents the best-of-breed in project management and use of application management tools. Areas of expertise include Java, XML, .NET, UNIX, PowerBuilder, Centura, Delphi, RPG, Oracle Forms and Rational Rose, plus database migrations. Metex has completed Application Transformations on all continents and a testament to the Transformation expertise of Metex is it's record of being the preferred vendor of choice for the numerous software companies that have relied on Metex to modernize their most important corporate asset.

*"We explored other alternatives, but chose Metex because of their focused, systematic method for migrating 4GL applications.*

*The responsiveness and attention to detail of the Metex migration team, in all stages of the process, contributed significantly to a successful migration."*

Diana Boulay, VP Systems  
Drexler Markette

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