Mindtree
Welcome to possible

Best fit IT pricing models with mutual benefits for service providers and customers.

Executive summary

Information Technology (IT) has shown rapid growth in the last two decades, opening up the need for a robust pricing model to meet changing expectations. Increasingly, customers are looking for benefits beyond cost savings and service improvements. This has led to the emergence of pricing models beyond traditional ones such as Time and Material (T&M) and Fixed Price (FP).

This white paper discusses various pricing models with their characteristics, risk comparators, pros and cons and best fit customer engagement. It covers some examples of the pricing models tried out in Mindtree. It also covers the due diligence required to decide the best fit pricing model for a given situation, with mutual benefits for both customer and service provider.

Contents

A background on pricing models

A pricing model for an IT service refers to the contractual agreement between a service provider and a service gainer. The agreement is formed based on the type of service the parties engage in. Today, pricing models in the IT industry have matured from the traditional T&M and FP models to the modest managed services / outcome based models. An inevitable progression as the IT industry went from simply understanding customer needs and services, to establishing innovative, non-linear and agile pricing models. In an effort to build more sustaining relationships and getting to the next level of a mutually beneficial partnership.

The best fit pricing model

For a pricing model to be successful, it should strike the right balance between the customer's expectations of quality, timeliness and price, and the service provider's cost and operational efficiency. Customer engagements may not be successful with one type of pricing model every time. It's a journey for both the parties to go agile based on best fit for the scoped services and engagement models.

Mutually beneficial pricing models

Many pricing models are currently practiced by the IT industry. From the traditional T&M and FP, to more talented ones like managed service / outcome-based models. At a higher level, pricing models can be divided into linear and non-linear categories.

Linear pricing models

Linear pricing models are based purely on the relationship between time and material (effort and rate). The service provider is paid based on the resource provided or the effort spent for the required duration of agreed time.

Some linear pricing models are described below:

a) Dedicated team: The dedicated team model works as a dedicated service provider for a period of time. This team acts as the virtual extension of the client's in-house development team. The customer takes the onus of getting work done effectively from the team. Advantages of this model include knowledge retention and the flexibility of utilizing the team for different requirements. Monthly bills are raised based on the number of resources dedicated every month.

Figure 01 shows the pros and cons of using the dedicated team pricing model.

b) Time and Material (T&M): The T&M model works best for customers who want a flexible and agile project execution. Here they play a greater role in the development of the software product or solution. This model works best when requirements change frequently and is generally used for product development projects. In this model the customer carries virtually all the related risks of scope, quality of deliverables and project management. Therefore the margins for T&M players are the lowest. There are no risks and no investments by service providers.

The service provider assigns a team to the customer and the actual time spent by the team on the project is billed. Monthly invoicing is pro-rata, based on the total hours spent on the project and the rates for the skill sets involved.

Traditionally, service providers are paid basis the number of person hours spent on writing code. So, to maximize their revenue, service providers try to maximize the hours spent and number of people used to write the code. Customers

Fig. 01. Pros and cons of using the dedicated team pricing model.

Pros	Cons
Simple to understand and implement	Lack of ownership from service providers
Can be effectively used to compare prices across service providers	Low level of team motivation due to lack of career mentoring
Knowledge retention	No time / effort commitment from the customer in the utilization of resources from service providers
Flexibility to utilize the team for different requirements as needed	Not closely related to customer's business need or outcome
Low risk model for both service provider and customer	No incentive for service providers to be efficient

on the other hand, want to reduce the total cost of development and therefore want to minimize billed hours. This creates misaligned incentives between customers and service providers.

Figure 02 shows the pros and cons of using the Time and Material (T&M) pricing model.

c) Fixed Price (FP): The fixed price model is ideal for small and medium level projects with clear and well-defined requirements. In this model, the service provider and the customer both carry some scope-related risk. But, as per the agreed contract, any change in the scope would result in a change in the price. Fixed price models allow customers to pay a fixed price for a project that is agreed upon by both the parties. The fixed price could be split and paid on milestones. This model works where the scope and specifications of the project are crystal clear from the very beginning and system requirements have been defined clearly. In this model, it is very important to discuss everything and make an estimation of the appropriate cost of the project at the very beginning.

It is certainly a low-risk option for the customer, as the FP model ensures that the project is done and delivered within a specific time and budget. The FP project plan specifies costs, timelines and deliverables in unambiguous terms and is ideal for customers with set goals, detailed project specifications and a limited budget.

The pros and cons of using the FP model is shown in figure .03.

Non-linear pricing models

Non-linear pricing models decouple the relationship between time and material (effort and rate). Normally T&M and FP do not offer much scope for modification and changes. Service providers have realized the need to be flexible to satisfy their customers. This has led to innovations in pricing models that suit varying needs. Some non-linear pricing models are mentioned below:

a) Hybrid model: The hybrid model uses T&M techniques to estimate costs for projects that do not have clear-cut goals or detailed and complete requirements initially. It then allows customers to pay a fixed price based on the estimation. This hybrid pricing model has the best features of both the models – T&M and FP, as mentioned above. It allows service providers to deploy resources as in the T&M model, but most of the project is executed according to the FP model. Hence, the project has a smooth workflow and well-aligned processes.

Hybrid is the best pricing model for bigger, longer and ongoing projects with unclear objectives at the start. Here input and feedback is needed in the beginning, but delivery can be perfected over time to ensure that all customer requirements are successfully met. This model is a great middle ground for professionals who like hourly payments and customers who prefer to make a one-time payment for the project. The hybrid pricing model helps customers optimize budgets without compromising on the quality of product or application. It also gives the service provider a controlled environment with shared risks in operations.

Fig. 02: Pros and cons of using the Time and Material (T&M) pricing model.

Pros	Cons
Simple to understand and implement	Lack of ownership from service providers
Can be effectively used to compare price across service providers	Low level of team motivation due to lack of career mentoring
Knowledge retention	Through scaled estimated efforts, service providers can try for increased billing
Flexibility to utilize the team for different requirements as needed	Not closely related to customer's business need or outcome
Low risk model for service provider and moderate risk model for client	No incentive for service providers to be efficient

Figure 04 shows the pros and cons of the hybrid pricing model.

b) Managed services model: The managed services model offers defined service deliverables at a fixed cost. Traditionally, value was realized according to how well it was managed by the service provider, and how well it was perceived by the customer. This was more qualitative in nature. In the managed services model on the other hand, the value-add is quantitatively measured in terms of target Service Level Agreements (SLAs). This is based on clearly defined parameters in project performance and quality.

Customers are billed at a fixed monthly cost plus unit cost per additional unit delivered. For customers, the model helps them arrive at a predictable budget. For service providers, it assures continuous fixed revenue, plus additional revenue through scalability and better margins through repetition. Mutually agreed SLAs will be met, unless the service provider wishes to pay a penalty. If the service provider meets / exceeds all agreed SLAs they are monetarily rewarded, as per the contract.

Some key features of the managed services model:
- The service provider takes end-to-end responsibility of set service lines and deliverables
- The service provider makes the decisions and takes the responsibility to provide the agreed set of deliverables
- Budgets are mostly fixed for the entire piece of work, making it more like a fixed price managed services engagement. In this case, the service provider has a free hand in deciding how, where and with how many personnel the project can be delivered. The risk

associated with such an approach is that the service provider may decide to allocate shared resources, which could result in delivery issues
- This model is often adopted when work can be clearly scoped out, with clearly marked deliverables
- For this model to work, the service provider should have an excellent understanding of the customer's systems. The customer in turn should be confident enough to hand over work to the service provider
- The customer's role is that of a reviewer with the additional responsibility of contracts management and budget tracking
- The service provider will be responsible for selection of resources as well as managing stakeholder expectations
- There will be clearly marked SLAs for each deliverable, with penalties applicable for non-delivery
- Delivery of service can be performed onshore at the client location, offshore or a combination of both
- A managed services model is often adopted by enterprises as a continuation of an existing staff augmentation. Adopting a managed services model from day one comes with lots of risks (ref. fig. 05).

c) Outcome-based pricing model: Outcome-driven solutions are pin-pointed and positioned as delivering specific value to the business. Outcome-based projects aim to deliver measurable impact on the customer's overall business results. The basic philosophy is to align the interests of the service provider and the customer so that both work towards the same goal. In this model, the scope is the business outcome itself. Clearly defined and fixed outcomes which can be measured and delivered for a given project is critical to its success. In an outcome-based

Fig. 03: Pros and cons of using the FP model.

Pros	Cons
Clearly scoped small / medium sized engagements	Customers have no control in resource utilization as maximum ownership is with service provider
Closely related to customer's business needs with clearly defined objectives and milestones	Knowledge retention is at risk as the development team might get dispersed after project completion
Low risk model for customers	High risk model for service provider
High assurance of project completion within estimated budget and timelines	Difficult to compare prices across service providers as final cost driven by productivity and risk assessment
Highly motivating for service providers to be efficient and productive	Quality can suffer as end-to-end development is managed by the service provider

model, resource loading, costing and pricing is a complicated exercise.

The mechanism for paying the service provider varies. But generally the payment is made in made in one lump sum when the result is achieved or over shorter milestones, so that the service provider recoups its investment in time.

The three key elements of an outcomes-driven project are:

- The service provider cannot earn a direct revenue from the customer unless the work outcome delivers value to the customer
- The scope of work impacts a large chunk of the process that influences a business outcome, and service provider can adjust / tweak some elements of the process to impact the business outcome
- Service providers need to develop competences to tightly define the scope of an outcome-based project to be successful

The primary driver of outcome-based pricing is the process characteristics, and scope of engagement with the customer. As a rule of thumb, if a process directly impacts measurable business outcome like revenue or cost, the service provider should explore a business outcome-based pricing. More so if there are enough opportunities to impact the business outcome. However, the thing to remember is whether the scope of work covers the majority of elements that drive a particular outcome.

In outcome-based projects, service providers control a significant portion of the value chain affecting outcomes, even when they are not directly under the service provider's control. Hence, bringing into your sphere of influence things not under your influence is a critical part of the execution model. This is where partnership with other service providers, even competitors, will be a critical factor in success (ref. fig. 05).

In this model, the customer gets rewarded by converting a fixed cost into a truly variable cost model that scales with the business. It frees up client executives from worrying about issues like technology, process and people, and allows them to focus on business outcomes – things that really matter to the business. The customer carries no risk since they pay only when they get the desired outcome. By having a standardized definition of input and output in an outcomes-driven model, services become more like products.

In an outcome-based model, service providers bet on the customer and vice versa, to make success happen. Risk transfers from customer to service provider, the model progresses from T&M to outcome-based. The service provider should account for transference of risk and cover by including a risk premium in the price. The risk premium increases as you progress through these models and results in increasing margins for the service provider. The ability to measure risk and charge the appropriate risk premium is a critical factor in the service provider's success (ref. fig. 06).

Fig 04: Pros and cons of using the hybrid model.

Pros	Cons
Utilizes the best features of both the T&M and FP pricing models	Customer has no control in resource utilization and maximum ownership is with service providers
Middle ground for the customers amongst hourly payment and one-time payment	Shared risks between service provider and customer
Helps the customer to optimize the budget without compromising on the quality of deliverables	
Low risk model for both service provider and customer	
Knowledge retention	

Fig .05: Pros and cons of using a managed service model.

Pros	Cons
Since delivery and stakeholder expectations are the service provider's responsibility, the customer can focus fully on their core strategic initiatives	Service providers are sometimes reluctant to assume more management responsibilities
Service providers are more independent and have a relatively interference-free management of the project	Culture mismatch between the customer and service provider can result in a lack of understanding, which may affect deliverables
Enables service providers to make long-term strategic investments that should indirectly benefit the customer	Sometimes, service providers don't have a view of the scope of the project or may not understand all of the customer's pain points, which could result in major setbacks
Service providers bring their best practices into the project, thereby making key process improvements	In a multi-service provider scenario, where for instance one provider manages applications and the other, infrastructure, blame games are common, with no-one willing to assume responsibility
SLA driven approach results in key process improvements delivering significant, measurable benefits to the customer	Re-allocation of the contract, in case of performance issues or non-conformance of SLAs, might be a challenge, given that the existing service provider will be less cooperative
Knowledge retention becomes more streamlined and sustainable	

Fig. 06: Pros and cons of using outcome-based pricing model.

Pros	Cons
Directly aligned to the customer's business outcome	Lack of transparency in how work is performed
Potential for higher eventual savings as labor arbitrage is replaced by productivity and synergies between tasks	Little insight into cost of services
Ability to incent more innovative behavior from service provider	Cultural resistance from both customer and service provider
Deep appreciation of the customer's business model, operations and industry nuances	Customer enterprises are sometimes too immature to appreciate the change management process

d) Transaction pricing model: A transaction is a sequence of steps with defined input and output, which achieves a business purpose. Examples of transactions include invoice or payroll processing. A transaction unit is a unit of measure with which a transaction can be measured. Examples of transaction units are 'per pay slip' or 'per invoice', etc. A transaction price is typically quoted as 'price per transaction unit'. It is generally mentioned as applicable for a specified transaction volume range.

The transaction-based pricing model is based on the number of transactions processed. Typically a base price is provided for a specified volume band, with a negotiated increase or decrease in price as usage fluctuates around the specified band. In this model, the scope becomes very important. The scope is also slightly different from conventional projects and should be defined more tightly. The volume of transactions and the variations in volume in a day, week, month or months make a huge impact on pricing and effort. Another important scope element is the form of input. Whether the input is electronic, paper form, integrated into xml, importable or already imported can have a huge impact on the cost. Any change in the assumption of proportion of the two forms of applications could make a huge effort and cost difference for the service provider.

In this model, service providers take on a higher risk. They take on risks related to the volume of business, as the pricing is based on certain volume assumptions. Change or variation in the volume can have can have a dramatic impact on their cost.

Figure 07 shows the pros and cons of using a transaction-based pricing model.

Which pricing model suits a given engagement?

The pricing model need not be intelligent enough to address the customer's budget objectives, but has to suit the respective customer engagement. IT engagements spread from discovery and definition types to implementation, maintenance and support. The pricing model that worked for one type of engagement may or may not work for another. It is also possible that a pricing model that suits one client may not suit another. Naturally, assessing the best possible pricing model for a customer or an engagement sometimes requires a trial (fig. 08).

Examples of Mindtree tried and tested pricing models

Mindtree has tried out various pricing models like dedicated team, T&M, FP, managed services, outcome-based models, etc. There are various challenges, pros and cons of each of these models in various engagements and customer scenarios. Each of them has learnings which can be leveraged within Mindtree and across the IT industry. This artifact covers some pricing models with their differentiating factors, best suited customer scenarios, benefits to customer / service providers, and value-add perceived by the customer.

There are many customer engagements with linear pricing models such as dedicated team, T&M and FP. Since we have already discussed the pros and cons of these pricing models earlier in this white paper, we will not mention anything specific. Here, we will focus more on non-linear pricing models as they do not have a standard pricing across the IT industry and they vary with customer demand and maturity, and their relationship with the service provider.

Fig. 07: Pros and cons of using a transaction-based pricing model.

Pros	Cons
Closely tied to the customer's business cycle	May not be directly tied to the customer's business outcome
Enhances customer visibility into consumption pattern	Lack of transparency on how work is performed
Encourages productivity and efficiency	

Fig. 08: Which pricing model suits a given engagement?

Dedicated team model

- First time engagement with the particular customer
- Projects of all sizes and scales with ongoing long term milestones
- Scope is unknown and flexibility in scope change is expected

Time and Material (T&M) model

- Projects of all sizes and scales with ongoing long term milestones
- Scope is unknown and flexibility in scope change is expected
- First time engagement with the customer
- Uncertainty on estimated effort for completion of scoped work

Fixed Price (FP) model

- Customer has a clearly defined scope, aligned to short term goals / objectives of the enterprise
- Customer does not want to own the risks of delivery, people and quality, but will be ready to own risks related to scope through change requests

Hybrid model

- Best pricing model for bigger, longer and ongoing projects, which may need inputs in the beginning but can be perfected over time
- Service provider is engaging with the customer for the first time
- Both service provider and customer want to mitigate the risks of T&M and FP pricing models

Managed services model

- Work clearly scoped out, with clearly marked out deliverables
- Service provider has an excellent understanding of the customer's systems. The customer in turn is confident enough to hand over the work to them

Outcome-based pricing model

- Clearly defined output
- Output aligning to business process or where direct impact can be defined
- For customers who want to align the service provider's goals with their business goals

Transaction-based pricing model

- Transaction volumes are known and predictable
- From the custome's perspective, this model is used for business process which can be clearly defined, measured in discrete units
- Transaction volume are tied to the service provider's cost drivers
- For the service provider's perspective, this model is used in business process that are standardized, transaction intensive and demand-driven

Managed services pricing model —
Business Intelligence (BI) factory

Managed services pricing models require a thorough understanding of the customer's IT processes, standards and dependencies to execute the services. This model also needs very good visibility on the pipeline work in the customer enterprise to ensure constant work units and guaranteed revenue. Mindtree recommends implementing this model for customers where it has worked for more than six months to mitigate engagement risks.

Here is a case study of one of our banking clients where we used a managed services model, known as "Business Intelligence (BI) factory" for end-to-end BI related implementation. The diagram below shows the BI factory model at high level (fig. 09).

Figure 10 is a sample list of service categories applied on this model with their pricing method.

The BI factory model has defined various service categories with floor units to be served per month. The customer pays Mindtree a monthly fee of USD XXX to serve the agreed monthly floor value of service units. On implementing additional units of service, the customer will pay an additional amount, based on the agreed unit price for the service unit – complexity wise, as depicted in the table below (fig. 11).

The salient features of this pricing model are below:
- The core team is a combination of an onsite team with key technical resources offshore
- The onsite team handles customer interaction, requirement gathering, project management, UAT coordination and production deployment

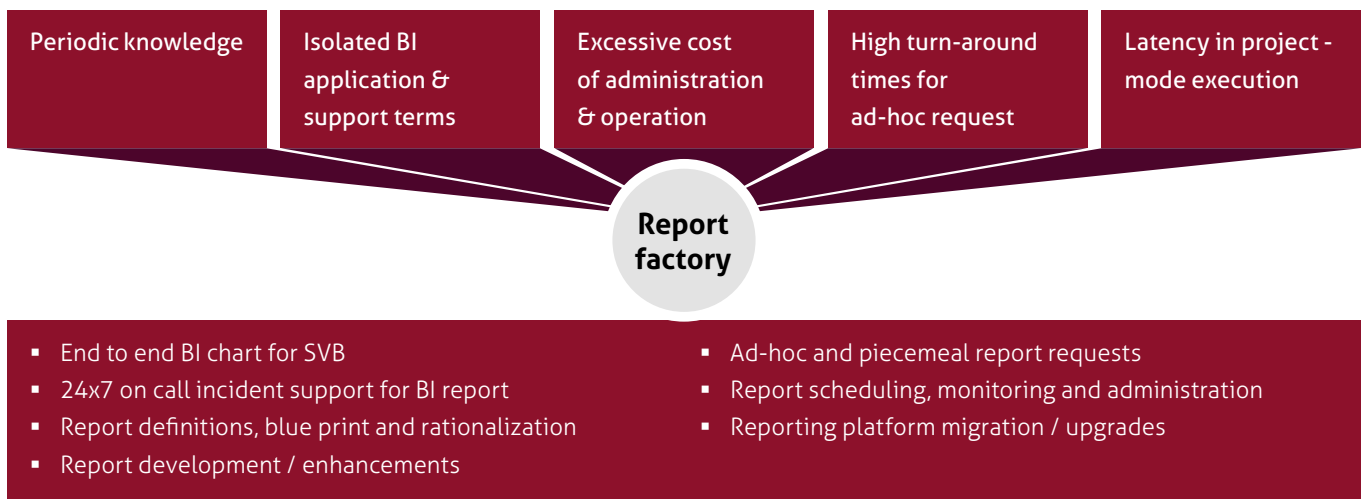Fig. 09: BI factory model at high level.

| Periodic knowledge | Isolated BI application & support terms | Excessive cost of administration & operation | High turn-around times for ad-hoc request | Latency in project - mode execution |

Report factory

- End to end BI chart for SVB
- 24x7 on call incident support for BI report
- Report definitions, blue print and rationalization
- Report development / enhancements
- Ad-hoc and piecemeal report requests
- Report scheduling, monitoring and administration
- Reporting platform migration / upgrades

Fig. 10: List of service categories applied on this model with their pricing method.

Report factory with service lines	Service line with monthly volume	
	Production incidents	X X
	Enhancement	X X
	New report request - no universe change	X X
	New report request – with universe change	X X
	Continuous improvement project management governance review	

- The larger offshore team's service offerings include design, coding and testing for all service categories
- The offshore team can be ramped-up or ramped-down basis the pipeline of work. It is critical to track the future work pipeline for Mindtree to plan better support for peak workloads.
- SLA driven model with risk and reward benefits

The key highlights of this engagement through our experience so far are shown at fig. 12.

Hybrid pricing model — Microsoft offshore development track

At Mindtree, we often recommend a hybrid pricing model through a combination of T&M and FP in situations where the customer has long term ongoing projects. Especially when there is a risk of scope creep in the initial stage of the projects, or until the scope and requirements are frozen. The diagram at fig. 13 shows a case study of a Mindtree banking customer where we have used the hybrid pricing model for their Microsoft-based project implementations.

The salient features of this pricing model are below:
- Combination of a core team onsite billed on T&M, and a shared team offshore billed on FP pricing, for each estimated fixed price project
- The onsite team handles customer interaction, requirements gathering, project management and estimates for projects with frozen requirements
- The larger offshore team's service offerings include project design, coding and testing and is shared across

multiple project implementations based on percentage allocation

The key highlights of this engagement through our experience so far are shown at fig. 14.

Outcome-based pricing model — data analytics solutions

Mindtree recommends outcome-based pricing models where the customer has fixed and clearly defined outcomes, with a standardized definition of input and output. The scope of work would cover most of the elements that drive a particular outcome. Mindtree would work on a process with direct impact on measurable business outcomes like revenue or cost and would have enough opportunities to impact the outcome.

Fig. 15 is a case study of a banking customer where we have used the outcome-based pricing model for their 409A valuation CapMx outputs. In this case the customer is charged on various stages of the outcome, with a unit cost and monthly billing.

The stages of outcome in project 409 valuations are shown at fig.15. Each of the outcomes goes through a series of stages (mandatory / optional). Complexity of a particular stage for a defined outcome varies based on the inherent factors of that particular outcome.

The key highlights of this engagement through our experience so far are given in fig. 16.

Fig. 11.

| Complexity	Unit cost (USD)
Production incident	USD XXX
Enhancements	
Simple	USD XXX
Medium	USD XXX
Complex	USD XXX
New report request (no universe change)	
Simple	USD XXX
Medium	USD XXX
Complex	USD XXX

Fig.12: The key highlights of our management service engagement model through our experience so far.

Critical success factors	Artifacts from the Mindtree engagement
Pricing	Fixed monthly contract value for agreed service units; charge unit price to every additional unit of service delivered
Billing	Monthly
Scope	Scope / requirements assessment and clarification within the agreed SLA based on complexity of unit of work
Best fit customer engagements	Customer enterprise has the visibility of continuous growth and enhancements to its IT applications, assuring a minimum monthly floor value
Scale and size of engagements	Large scale and ongoing
Engagement maturity	Service provider to understand the customer's business and IT processes, nuances and dependencies
Mutual benefits	For the customer, the model is highly cost effective, cost predictive and has reduced overheads of management; the customer can focus on strategic decisions and leave the operational work to the service provider; for the service provider, the model is highly opportunistic on innovations, optimized productivity, flexibility on shared resources and has guaranteed annuity business
Risk	High risk for service provider; low risk for customer

Fig.13: The hybrid pricing model at a high level.
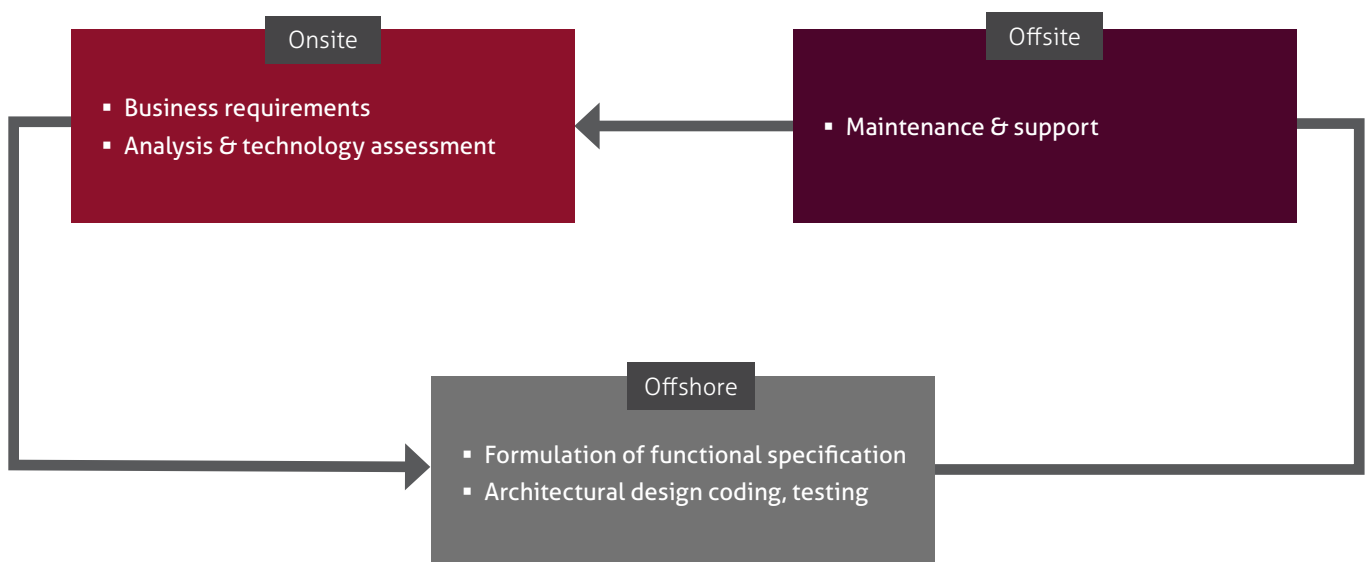
Transaction-based pricing model –
Managed Test Functions (MTF)

In the transaction pricing model, the scope becomes very important. In this model, the service provider takes on a higher risk. It takes on the risks related to the volume of business, as the pricing is based on certain volume assumptions. Any change in the volume or variation in volume can have a dramatic impact on cost. Mindtree recommends going with a transaction-based pricing model if the volume of transactions are high and predictable in a day, week or month timeframe.

The diagram at fig. 17 shows a case study of one of our banking clients in which we have used our transaction-based pricing model, "Managed Test Function (MTF)", for end-to-end testing-related services.

The MTF engagement is a hybrid combination of T&M and the transaction-based model because the testing service has low clarity on some initial testing activities which need to be priced on the T&M model. Once the scope and test scenarios are clearly defined, the scope of execution of the test cases is fairly known.

Some of the salient features of MTF model are:

- Supports the transformation of the customer's testing models
- Focus on transaction-based pricing
- In initial stages, customer directs the testing efforts and benefits are based purely on resource arbitrage; there is a complete focus on the resources delivering the service
- Definable, repeatable and predictable "unit price" for test work can be put in place for services
- SLAs drive the service provider's focus to the service delivered; ensures reduced time to product availability. The service provider scales up to demand, high quality test services and pre-defined and predictable costs

The MTF cost model can be shown in the format at fig. 18.

The MTF model has experimented with the combination of T&M and unit priced model for the benefit of both the customer and the service provider.

Some sample unit-based activities and T&M activities are depicted in the tables at figures 19 and 20.

Fig.14: The key highlights of the hybrid pricing model through our experience so far.

Critical success factors	Artifacts from the Mindtree engagement
Pricing	T&M for initial scope definition by core team; FP for project implementation with clearly defined scope
Billing	Monthly
Scope	Started with unclear scope and requirements of project definition, later clarified and frozen for the estimation of the fixed price project
Best fit customer engagements	Customer enterprise has the visibility of continuous growth and enhancements to its IT applications; customer does not have clarity on the scope and aims to clarify it during the initial definition phase of the project
Scale and size of engagements	Large scale and ongoing
Engagement maturity	Service provider to understand customer's business processes and nuances
Mutual benefits	For the customer, this model is highly cost effective, cost predictive and has reduced overheads of management; for the service provider, the model is highly opportunistic on innovations, optimized productivity, flexibility on shared resources and has guaranteed annuity business
Risk	Initial phase: Low risk for service provider and high risk for customer Subsequent phases: Low risk for customer and high risk for service provider

The key highlights of this engagement through our experience so far are shown at fig. 21.

Due diligence to identify best fit pricing model

Most times, pricing models are decided by customers, based on experience with other service providers, or influenced by their capabilities, and sometimes the maturity levels of both parties. There has to be a decision framework, to help both the service provider and the customer, to assess and finally decide on the best suitable pricing model. This is based on various parameters, like engagement / service types, working experience, enterprise maturity level, duration / relationship of engagement, mutual benefit and objectives / goals of the engagement at hand. This artifact highlights the key parameters and decision making framework / guidelines to be assessed right from the start when the new customer, engagement or project is worked upon at the RFI or RFP stage.

Due diligence for cost / benefit ratio between T&M and the business outcome model is a deciding factor for the customer and the service provider to decide on the model to implement. The risk premium should be high enough to justify the risk taken, vis-a-vis the T&M model. Another challenge is to cap the upper band — based on market demand (i.e. what the customer is willing to pay for the transfer of risk) and decide whether the cap can justify the risk taken by the service provider in the outcome model.

While some challenges are real, others are more a matter of perception. However, both can be addressed by ensuring a collaborative effort from the service provider as well as the customer.

Some suggestions in this direction are:

- Do due diligence on the engagement maturity with both customer and service provider, and assess data statistics to measure the risks
- Choose the right pricing model – one that aligns both parties' interests. For example, in case of insurance, if the transaction unit is 'no. of policies issued', then the interest of service provider and client are aligned by choosing the transaction-based model. As against this, if the transaction unit is 'no. of leads', then the interest of the client and service provider are not necessarily aligned as more number of leads would definitely translate into more payment for service provider but may not translate into more policies issued and thereby, premium, for client. Establish a mutually agreeable mechanism to address volume fluctuations.
- Agree on defining and measuring SLAs during the initial phases of the engagement and use this data for base lining them for the remaining term of the engagement Based on our experience on various pricing models executed in Mindtree, there is a table arrived at below which could be used for the initial due diligence to decide on the best fit pricing model.

Based on our experience on various pricing models executed in Mindtree, there is a table arrived at at fig. 22 which could be used for the initial due diligence to decide on the best fit pricing model.

Fig 15. Stages of outcome in project 409 valuations.

Stage	Series	Price
Information checklist	NA	USD XX
Pre-management call	A & B	USD XX
Full valuation and draft opinion	A & B	USD XX
Pre-management call	C & above	USD XX
Full valuation and draft opinion	C & above	USD XX
Audit responses	NA	USD XX
Fast track projects	NA	USD XX + 20% extra

Fig. 16: The key highlights of this engagement through our experience so far.

Critical success factors	Artifacts from the Mindtree engagement
Pricing	Outcome-based, stage-wise price per outcome; unit price varies based on complexity of stage for that outcome
Billing	Monthly
Scope	Clearly defined outcome elements with standardization of tasks; granular segmentation of tasks to be clear and precise
Best fit customer engagements	Customer with fixed and clearly defined outcome and scope of work for service provider; covers majority of elements of that outcome
Scale and size of engagements	Service provider to understand client's business processes and nuances
Mutual benefits	For the customer, the model is highly cost effective, cost predictive and has reduced management overheads; for service provider, the model is highly opportunistic on innovations, optimized productivity and has guaranteed annuity business
Risk	For customer – moderate; for service provider – high

Fig. 17: Case study of one of our banking clients in which we have used our transaction-based pricing model.
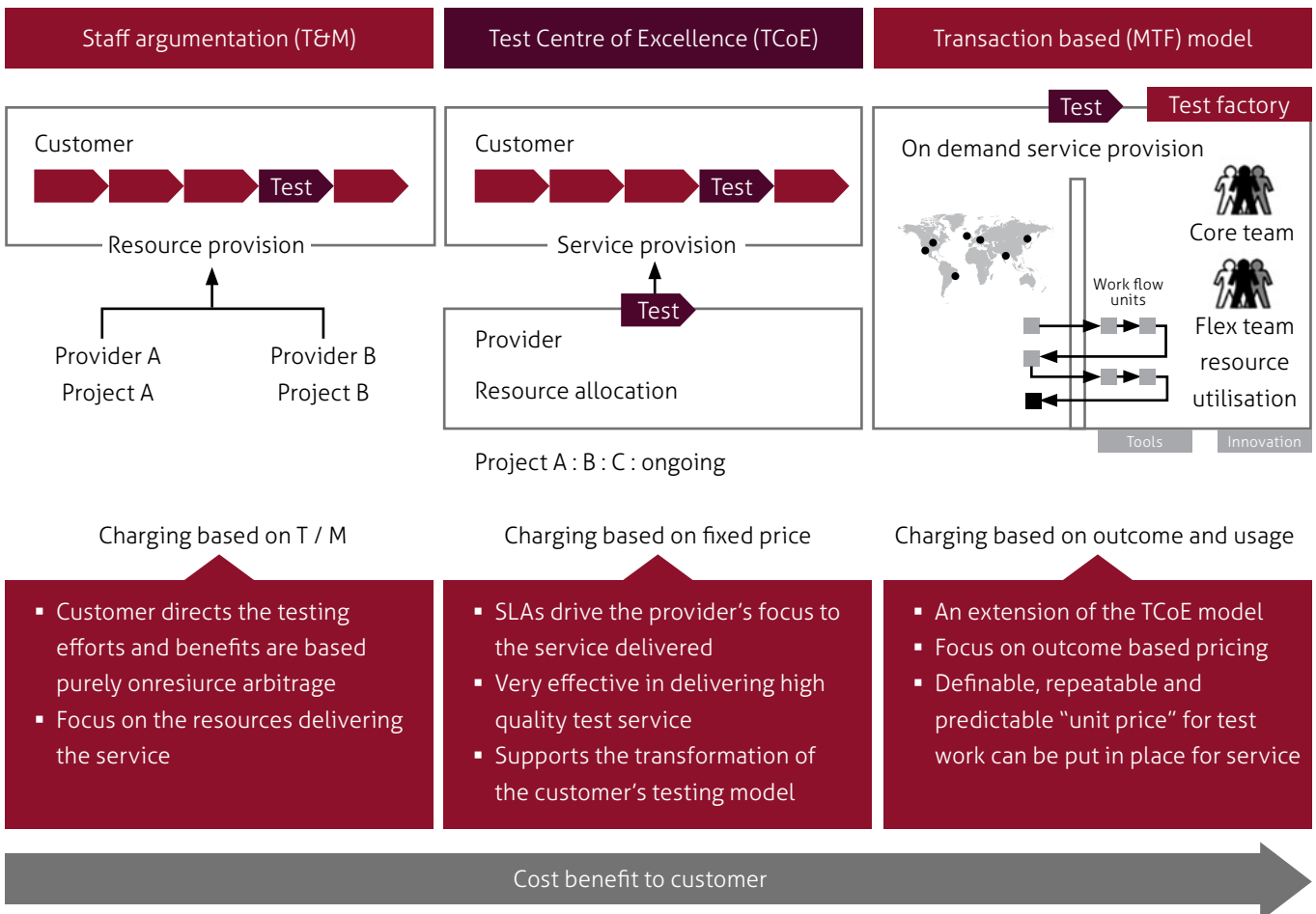

Staff argumentation (T&M)	Test Centre of Excellence (TCoE)	Transaction based (MTF) model
Charging based on T / M	Charging based on fixed price	Charging based on outcome and usage
▪ Customer directs the testing efforts and benefits are based purely onresiurce arbitrage ▪ Focus on the resources delivering the service	▪ SLAs drive the provider's focus to the service delivered ▪ Very effective in delivering high quality test service ▪ Supports the transformation of the customer's testing model	▪ An extension of the TCoE model ▪ Focus on outcome based pricing ▪ Definable, repeatable and predictable "unit price" for test work can be put in place for service

Cost benefit to customer

Fig. 18: The MTF cost model can be shown in the format below.

Model	S.N	Testing service category	Quality (examples)	Rate (examples)	S.N	Remarks
Manages services (MTF outcome based)	1	CAT-A: Unit based activity	X units	SA / units	XA	Pre-defined list of activities which has a fixed unit and cost associated with it. This fixed component of final test estimation (Business Requirements Document sign off) will not be changed until there is a trigger for CR
T&M	2	CAT-B: T&M (Not dedicated – actual effort usage based)	Y person-hours	$ B / P - hours	YB	Any activity which is not part of unit based activities, but requested and pre-approved by the PM This is a variable component of final test estimation, which will change as and when PMs request and pre-approve additional activities
	3	CAT-C: T&M (Dedicated - ODC model based staffing)	Z onsite leads	$ C/ onsite - lead / mouth	ZC	Dedicated resources are requested and pre-approved by PM Lead time of four to eight weeks for an onsite resources depending on whether the new onsite person is from an existing team with ready visa or from an outside team

Fig. 19. Some sample unit-based activities and T&M activities are depicted in the tables below.

			Unit based activities		
S.N	Service / activities	Description	Estimate	Units	Notes
U-1	Test effort estimation	Provides an estimate of the testing effort for an approved work effort (per project or CR)	4 business days	75	▪ Test estimation would be based on signed off BRD ▪ Estimate would include total number of units, cost and assumptions
U-2	Test plan creation	Create the test plan for a work effort (per project CR)	3 to 7 business days	150	▪ Test plan creation, new modification
U-3	Test scenario development	Define the test table scenarios	As per agreed schedule	3	▪ Each test scenario will have an average three test cases
U-4	Test case design and construction	Design test case based on testable scenarios	As per agreed schedule	1	
U-5	Test case Modification	Modify test cases	As per agreed schedule	0.5	
U-6	Test case execution	Execute test cases	As per agreed schedule	0.625	
U-7	Automation script creation	Automation script creation	As per agreed schedule	3	
U-8	Automation script modification	Automation script modification	As per agreed schedule	1.5	
U-9	Automation script execution	Automation script execution	As per agreed schedule	0.1	
U-10	Performance testing	Create and run performance test cases and POC	As per agreed schedule	case by case	

U-11	Test summary report	Test summary report per project or CR	1.5 business days	21	
U-12	Audit session	FED and KPMG test case audit	as per agreed schedule	0	

Fig. 20: Some sample unit-based activities and T&M activities are depicted in the tables below.

T & M activities					
S.N	Service / activities	Description	Estimate	Costs	Notes
T-1	Test Initiation / assessment phase support	Support extended during assessment phases	As per agreed schedule	Cost = effort spent. $ amount as per the MSA	The support would be extended on project manager's request. This effort and cost estimate will be communicated up front and needs to be approved by the project manager
T-2	UAT support	Support extended during UAT	As per agreed schedule	Cost = effort spent. $ amount as per the MSA	The support would be extended on project manager's request. This effort and cost estimate will be communicated upfront and need to be approved by the project manager
T-3	Product go live deployment support	It normally includes a set of core tests of basic GUI functionally to demonstrate connectivity to the database, application servers and printers	As per agreed schedule	Cost = effort spent. $ amount as per the MSA	The support would be extended on project manager's request
T-4	MQC tool upgrade	MQC tool upgrade related all sub activities	As per agreed schedule	Cost = effort spent. $ amount as per the MSA	The support would be extended on SVB SQA managers request. This effort and cost estimate will be communicated upfront and needs to be approved by the SVB SQA
T-5	POC for tools	Any request with approval from project manager to evaluate	As per agreed schedule	Cost = effort spent. $ amount as per the MSA	The support would be extended on SVB SQA approval

T-6	Security testing	Performing application vulnerability scanning	As per agreed schedule	Cost = effort spent. $ amount as per the MSA	The support would be extended on project manager's approval
T-7	SOA test	Performing SOA testing using SOA testing tool	As per agreed schedule	Cost = effort spent. $ amount as per the MSA	The support would be extended on project manager's approval
T-8	KT new	Only KT for new work efforts involving clients application and system that have not previously	As per agreed schedule	Cost = effort spent. $ amount as per the MSA	KT - existing cross training across portfolios will not be billed by MTF
T-9	Mandatory project meetings- test leads and onsite program manager	Status meeting on MTF (if effort extends beyond 1hr per test lead per week), scum project status meetings, defect triage	As per agreed schedule	Cost = effort spent. $ amount as per the MSA	MTF test lead will communicate up front and the support would be extended on project manager's approval
T-10	Test date preperation	Create of test data when the test data is not provided (example - mock test data of FAS91)	As per agreed schedule	case by case	The support would be extended on project manager's approval

Fig .21. Transaction-based pricing model – Managed Test Functions (MTF), key highlights.

Critical success factors	Artifacts from the Mindtree engagement
Pricing	T&M based pricing for initial test scenario scoping activities; transaction-based unit pricing for the execution of test cases
Billing	Monthly
Scope	Unclear initial test scope and requirements; post assessment phase, clearly defined test scenarios and test cases
Best fit customer engagements	Client with high volume of transactions of a similar pattern
Scale and size of engagements	Service provider to understand customer's business processes and nuances
Mutual benefits	For the customer, the model is highly cost effective, cost predictive and has reduced management overheads; for the service provider, the model is highly opportunistic on innovations, optimized productivity and has guaranteed annuity business
Risk	For client – moderate; for service provider – high

Fig. 22: The initial due diligence to decide on the best fit pricing model.

Pricing model	Project scope	Project Ct scale	Project duration	Risk	Client budgeting	Service provider billing	Service provider margins	Engagement maturity
Dedicated team	▪ Flexibility to change	All	Ongoing long term milestones	▪ Low risk for service provider ▪ Low risk for client	Fixed monthly budget	Resource-based	Low	Initial engagement
Time & Material (T&M)	▪ Flexibility to change	All	Ongoing long term milestones	▪ Low risk for service provider ▪ Moderate risk for client	Floating budget	Effort-based	Moderate	Initial engagement
Fixed Price (FP)	▪ Clearly articulated scope ▪ Less flexibility needed for scope changes	Small and medium	Short term	▪ Low risk for client ▪ High risk for service provider	Specific / limited budget with predicted needs for few years	▪ Milestone based ▪ Project completion based	High	Significant time spent to understand the customer's IT processes
Hybrid (T&M for FP)	▪ Unclear targets in initial phase ▪ Initial phase defines scope for subsequent phases	Large	Ongoing short term milestone	1st phase: ▪ Low risk for service provider ▪ High risk for client 2nd phase: ▪ Low risk for client ▪ High risk for service provider	1st phase: Floating budget 2nd phase: Specific / limited budget	1st phase: ▪ Resource-based ▪ Effort-based 2nd phase: ▪ Milestone based ▪ Project completion based	Moderate	▪ Initially T&M ▪ FP, post clarity on customer IT processes and scope
Transation - based model	▪ Clarity on volume of transaction range	Large	Ongoing	▪ High risk for service provider	Budget for a specific transaction volume band per agreed duration	Billing based on transaction volume executed in agreed duration	Moderate	Service provider to understand customer transaction rates

| Managed services model | • End to end services with deliverables | Large | Ongoing | • High risk for service provider
• Moderate risk for client | Budget for monthly fixed cost and x% of variance cost | Monthly based on delivered units | Moderate | Service provider to understand customer IT and business well |
| Outcome-based model | • Clearly defined and fixed outcome | Small | Ongoing | • High risk for service provider
• Moderate risk for client | Budget for estimated outcome volume | One lump sum post result is achieved | Moderate | Service provider to understand client's business processes and nuances |

Conclusion

Customers will always look for capital investment avoidance, minimum risk, and high quality of service at a low price. All this with maximum price flexibility and transparency. On the other hand, service providers will look for minimum operational and financial risk, consistent and predictable profit and revenue growth, the longest contract term possible and commercial viability.

An effective pricing model is one that helps in aligning the interests of the customer and service provider.

It should help in arriving at a price that is competitive yet profitable, flexible, simple and easy to apply. It should be representative of business realities and maximize benefits for both the parties.

In summary, it is essential to do due diligence of each customer engagement, along with risk assessment, before deciding on the best fit pricing model for them. This due diligence should be based on scientific methods with known parameters across the IT industry. The above table is a good guideline for such an approach.

About the author:

Shubha Krishnamurthy is currently employed in Mindtree as Program Director and has more than 14 years of IT experience in managing large scale Data Warehouse and Business Intelligence projects. She is currently managing delivery for all the Data Warehouse and Business Intelligence projects under banking and financial services and insurance industry group. Prior to Mindtree she worked in Wipro Technologies and Patni Computers as software engineer developing data warehouse and business intelligence applications. She holds a B.E with specialization in Electronics and Computer Science from S.D.M Engineering College of Technology, Dharwad.

About Mindtree

Mindtree is a global information technology solutions company with revenues of over USD 400 million. Our team of 11,000 experts engineer meaningful technology solutions to help businesses and societies flourish. We enable our customers achieve competitive advantage through flexible and global delivery models, agile methodologies and expert frameworks.